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"VICTOR SLĂVESCU" CENTRE FOR FINANCIAL AND MONETARY RESEARCH

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Research published scientific research aimed both economic development and clarification of the current economic phenomena and processes. As a result, conclusions and proposals offered by the authors address both academia - scientists, teachers, students - as well as decision makers. We emphasize the importance of scientific contributions, together with the clarity of concepts, methodologies and conclusions offered.

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PLENARY SECTION

BUDGETARY SPENDING AND GROWTH IN THE EU

Lucian – Liviu, ALBU[1], PhD

Abstract

In line with studies on the trend of budgetary spending and its correlation with the economic growth, firstly we analysed the convergence process in EU, both in matter of GDP per capita and in mater of few categories of expenditures. Secondly, based on available data we identified a number of correlations among the intensity in GDP of health expenditure, education expenditure, R&D expenditure and GDP per capita level as a measure of economic development. Moreover, by estimating some behavioural regimes characterising dynamics after 2000 in different groups of countries in EU we highlight potential future trends for main budgetary expenditures.

Keywords: budgetary spending European Union, real convergence, GDP, economic growth, behavioural regimes

JEL classification: C8, E7, H5, H6, O52, O47, R12

1. Introduction

In this study, based on a detailed analysis of the national economies in the EU, we consider, aside of two intensively used groups in literature (eastern group, EU11, and old members' group, EU15 or EU14 after Brexit), the following three groups of states: 1) the Eastern states, EU11E (Bulgaria, Czechia, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia); 2) the North-Western states, EU10NV (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, the Netherlands and Sweden); and 3) the Southern countries, EU6S (Cyprus, Greece, Italy, Malta, Portugal and Spain). In our opinion, this typology reflects more correctly the differences between the EU's component economies. Such classification we use for analysing the real convergence in EU.

According to the standard literature, we highlight that, as basic variable for the analysis of the real convergence process (at macroeconomic or regional level), the Gross Domestic Product per capita expressed by purchasing power parity (PPP) must be used. In order to test the existence of a convergence or divergence trend, authors are using various indicators, among most commonly used is the coefficient of variation. Moreover, to study the convergence process in matter of main budgetary spending (education, health, and research) we are estimating a number of behavioural regimes varying with their share in GDP.

2. Real Convergence in EU and Perspectives

In order to measure the speed and the meaning of the convergence process, in specialised literature various indicators are used, among which the most commonly is the coefficient of variation, it expressing the reduction of the level of dispersion between states in the case of income per capita (the so-called σ-convergence) or in case of testing the hypothesis of some higher rhythms of per capita income in less developed countries (the so-called β-convergence). In the present study we will use the coefficient of variation, the magnitude of which expresses the degree of concentration at EU27 level or within the group of countries. Its downward dynamics signifies a convergence process, and when it is ascending indicates a process of divergence.

As can be seen from the graphical representation in Figure 1, the trend of GDP per capita (expressed as a percentage, g%) over the period 2000-2016 (on the horizontal axis the years are recorded from 0 to 16) demonstrate a convergence process of the eastern group, EU11E, to the EU27 average, noted as 100 percent (the ascending trajectory represented by the solid bottom line). In contrast, the trajectory in case of the southern group, EU6S, shows a divergence process (the downward trajectory represented by the dashed median line). In case of north-western group,

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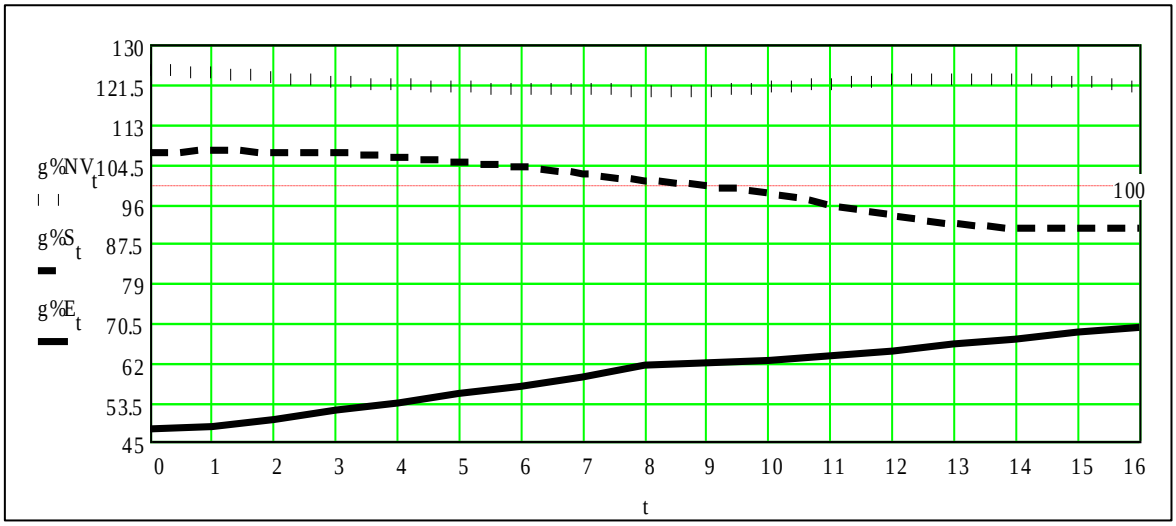
EU10NV, there was a slow convergence to the EU27 average (the slightly downward trajectory represented by the dotted top line).

Figure 1 - GDP per capita (%) over the period 2000-2016



Source: World Bank data and own computations (see also, Albu, 2016)

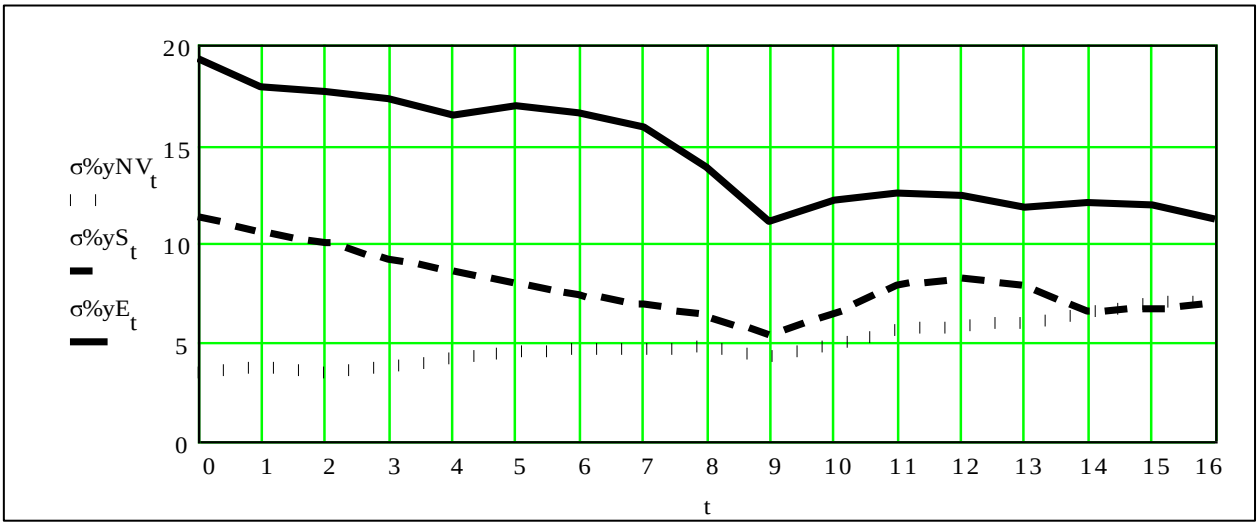
Compared to the EU27 average, per capita GDP in Romania has increased from only 33.5% in 2000 to 51.9% in 2008, after which it has fallen to 50% in the 2010 and 2011 crisis years. Only from 2012, the convergence towards the EU average was resumed, with Romania's position continuously improving to 57.5% in 2016. Related to the average of the eastern group, EU11E, GDP per capita in Romania has increased from 70.6% in 2000 to a maximum of 84.9% in 2008, after which it fell to 79.0% in 2011. However, starting in 2012, its convergence to the EU11E average resumed, up to 83.2% in 2016.

Based on data estimated by the IMF in the latest Annual Global Growth Forecast (IMF, 2017, April), we can expand the study on the EU convergence process to the 2022 horizon. According to estimations, trends from the previous period will continue, the convergence to the EU27 average of the Eastern group, EU11E, will advance, with average GDP per capita rising from 69.1% in 2016 to 75.4% in 2022. Correspondingly, for North-Western Europe, EU10NV, it is projected a fall from 120.9% of the EU27 average in 2016 to 117.8% in 2022, and in Southern group, EU6S, a slow decrease from 90.6% to 89.6%. For Romania, the projected growth is from 57.5% in 2016 to 66.3% in 2022. Also, related to the average of the group to which it belongs, EU11E, GDP per capita in Romania will continue to increase until 88.0% in 2022.

At the EU27 level, a convergence process was registered in the period 2000-2016, demonstrated by the drop in the value of the variation coefficient in the PPP per capita GDP series, from 28.3% to 19.8% (a value high means a low degree of concentration between countries and, conversely, a low one shows a high degree of concentration). However, the general trend of EU convergence is the result of different trends within the three groups of countries.

For the entire post-2000 period, there was a significant convergence trend within the Eastern group, EU11E, respectively within the Southern one, EU6S. In the same period, within the group of North-Western countries, EU10NV, it was registered a divergence, as can be seen from the graph shown in Figure 1 (where the dynamics of the coefficient of variation value for the three groups of countries are noted on the vertical axis with σ%yNV, σ%yS and σ%yE respectively). During the considered period, the value of variation coefficient decreased from 19.2% to 11.2% for the Eastern group, EU11E, and from 11.3% to 6.9% for the Southern group, UE6S. Contrary, in case of the group of North-Western countries, EU10NV, the value of variation coefficient increased from 3.4% to 7.0%.

Figure 2 – Dymanics of the coefficient of variation value for the three groups of countries (EU11E, EU6S, EU10NV) over the period 2000-2016

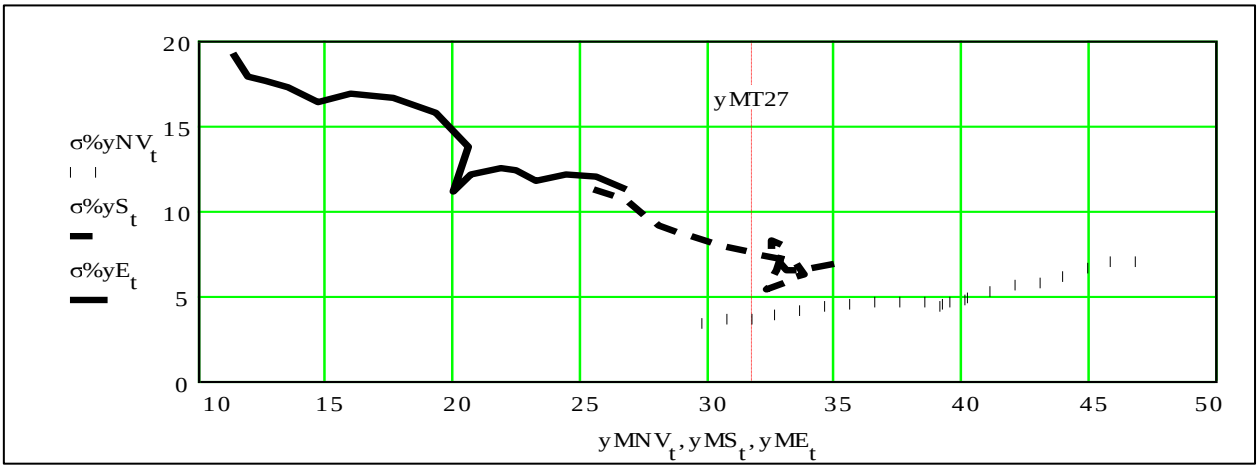


Source: World Bank data and own computations (see also, Albu, 2016)

Replacing the time axis (t) by the average GDP per inhabitant (y) recorded during the analysed period could highlight, as it is shown in Figure 3, at least three behavioural regimes within EU, corresponding to the three groups of countries:

- First behavioural regime, characteristic to the Eastern group, EU11E, is placed on the left side (the downward trajectory represented by the solid line), corresponding to a GDP per capita below the average value for EU27 (on the graphic, yMT27 means the EU27 average for the entire 2000-2016 period, respectively 31.8 thousand dollar PPP).
- Second behavioural regime, characteristic the Southern group, EU6S, is represented by the downward trajectory from the median part of figure (the dashed line), corresponding to a value of GDP per capita located in the vicinity of the EU27 average (respectively between 26-35 thousand dollar PPP).
- Third regime is represented by the dotted line located in the right side of the figure, corresponding to values higher than EU27 average.

Figure 3 - The correlation between the coefficient of variation value for the three groups of countries and the GDP per inhabitant



Source: World Bank data and own computations (see also, Albu, 2016)

3. Trends in Budgetary Spending and Correlations with Growth in EU

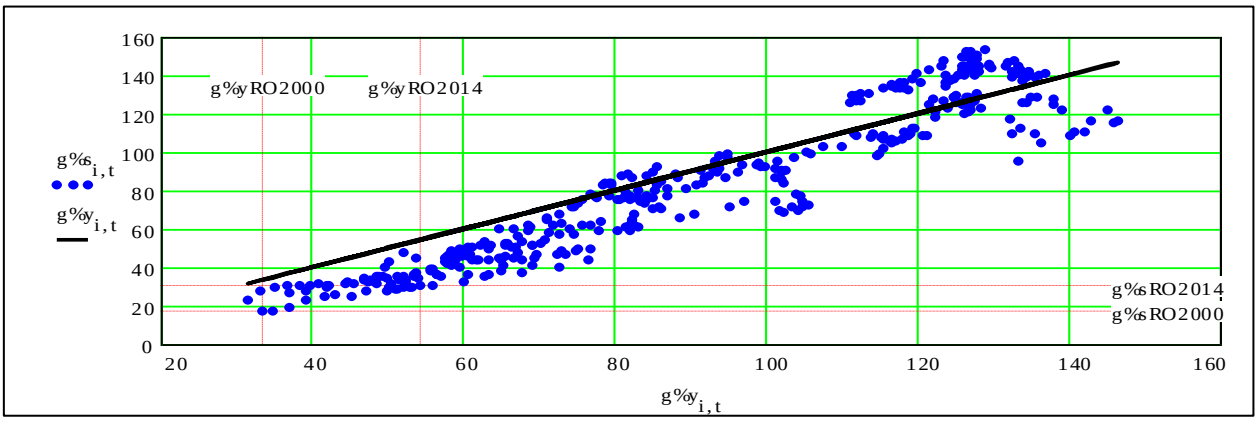
In case of less developed countries of EU, as Romania today is, in order to achieve a favorable dynamics over the next period, a massive investment effort is needed. Under the current conditions of a tightening of competition and external conditions, a decisive source of this effort will have to be

the internal accumulation and the development of an efficient domestic capital. Apart from the economic investment effort itself, investment in education, health and research promoted by the state will be major directions for economic development but also for modern socio-human development.

In terms of health, Romania is in the group of less developed European states. There is also a direct relationship between the health system and the general level of economic development, in Romania in the last years it is even relatively lower related to its general level of economic development. Thus, currently allocating only 5-6% of GDP for health, Romania is ranked the last in the EU. However, according to the correlation at the level of EU, according to our estimates, this weight, corresponding to the future dynamics of GDP, should, in the first part of the next decade, exceed 10% in Romania.

The graphical illustration of the discrepancies between the EU26 states (Luxembourg was considered together with Belgium) in terms of health expenditure during the period 2000-2014 is shown in Figure 4 (on the horizontal axis g%y is the ratio between GDP per capita, expressed in PPP, in a country and GDP per capita EU average; on the vertical axis g%s is the same ratio in case of health expenditures; i - countries, and t - years). On the graph is also presented (as the continuous straight line) the trajectory which can be considered as the equilibrium line of health expenditure.

Figure 4 - The discrepancies between the EU26 states (Luxembourg was considered together with Belgium) in terms of health expenditure during the period 2000-2014



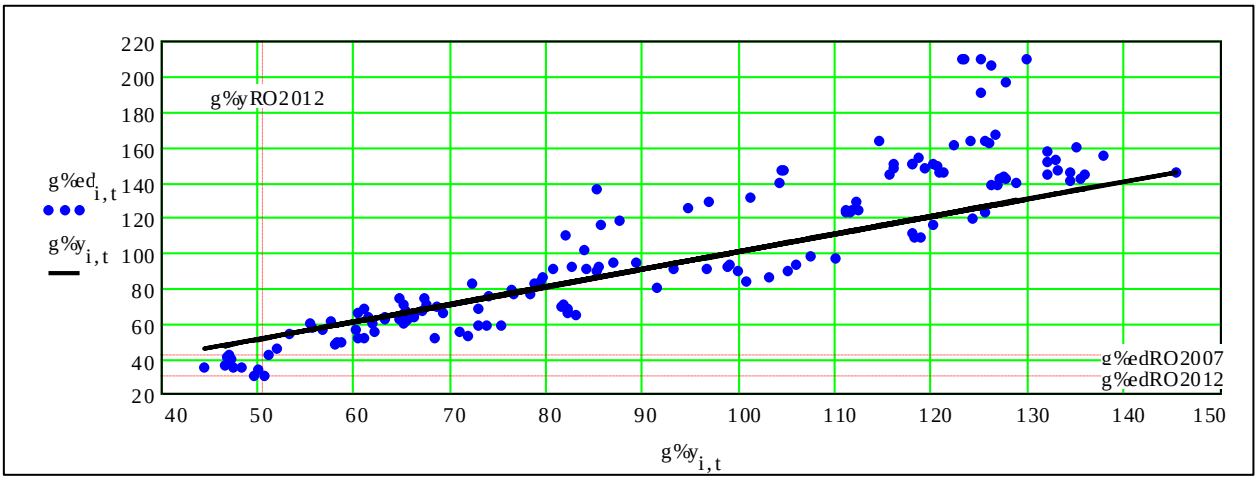
Source: World Bank data and own computations (see also, Albu, 2016)

As can be seen from the cloud of points, only a few states are placed above this line, for which the significance is that in those countries, in those years, health amounts were allocated higher than would have been appropriate to their position in EU through the prism of GDP per capita (it is the case of countries such as Sweden, France, Germany, Austria, the Netherlands, Denmark and Belgium, where more than 10% of GDP is allocated for health). On this graph, for Romania, the two indicators are marked in 2000 and 2014 respectively. Although in the analyzed period, the share of GDP for health expenditure increased in Romania from 4.3% to almost 5.6%, according to data from the latest World Health report (August 2016), the graph shows even an increase of the distance from the equilibrium line.

Similarly, Figures 5 and 6 show the situation in the EU in case of education expenditure and respectively R&D expenditure, the available data being for EU25 (EU27 less Greece and Luxembourg) over the period 2007-2012 and respectively for EU27 over the period 2003-2014. Interpretation is the same as for health expenditure. It is noticeable, especially in the case of research and development, the existence of huge discrepancies between countries, spending, as a percentage of GDP, ranging from only 0.3-0.5% in Romania to over 3% in the northern countries of Europe.

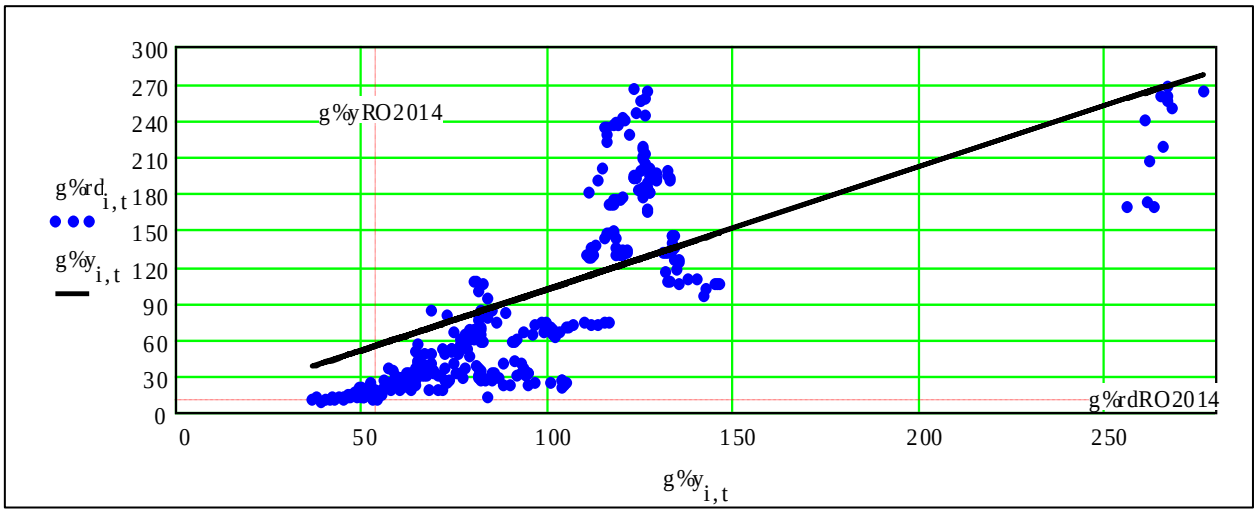
Next, we will analyze in detail the correlation between the share of health expenditure in GDP and the level of GDP per capita.

Figure 5 - The situation in the EU in case of education expenditure over the period 2003 – 2014



Source: World Bank data and own computations (see also, Albu, 2016)

Figure 6 - The situation in the EU in case of R&D expenditure over the period 2003 – 2014



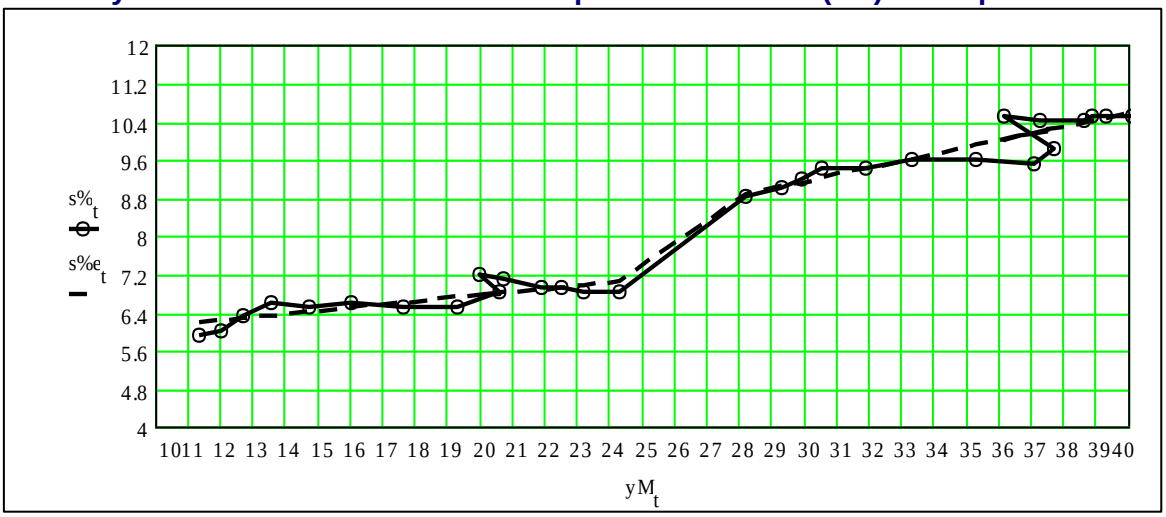
Source: World Bank data and own computations (see also, Albu, 2016)

4. Behavioural Regimes in Health Expenditure in EU

In case of a longer time horizon, it is interesting to reflect the trends of convergence / divergence in establishing benchmarks on the future dynamics of health systems, also expressed in terms of increasing the importance of health spending within national economies. In Figure 7, we present dynamics of the share of health expenditure in GDP (s%) in the period 2000-2014, in EU, divided this time in two groups of countries, depending on the average GDP per capita (yM).

It can be identified and estimated two basic regimes, the first straight segment of the trajectory represented by dashed line on the left side of the graph, characteristic to EU11 group, and the third straight segment of the trajectory represented by dashed line on the right side of the graph, characteristic to EU14 group. The EU11 is the group of eastern countries and EU14 includes old EU member states (less UK, Cyprus and Malta). The transitional regime is represented by the central segment, ensuring the transition between the two basic regimes. We notice the jump of about two percentage points in the value of s% through the transition from one base regime to the other.

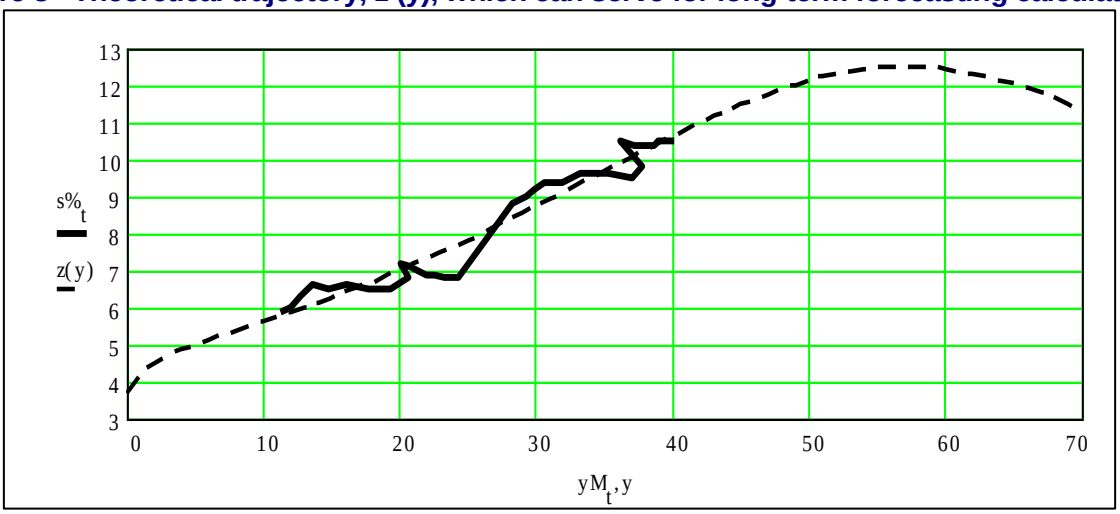
Figure 7 - Dynamics of the share of health expenditure in GDP (s%) in the period 2000-2014



Source: World Bank data and own computations (see also, Voicu, 2016)

Moreover, based on the available data and using a continuous non-linear model, we constructed a theoretical trajectory, z (y), which can serve for long-term forecasting calculations. Its graph is shown in Figure 8.

Figure 8 - Theoretical trajectory, z (y), which can serve for long-term forecasting calculations



Source: World Bank data and own computations (see also, Voicu, 2016)

It is noted that in the European space, the maximum of 12-13% for s% is reached for levels of income in the vicinity of the value of 60 thousand USD, beyond which may occur a flattening or even a decrease in the share of health expenditures in GDP.

Currently, a number of European countries, such as Sweden, France, Germany, Austria, the Netherlands and Denmark, have already exceeded 10% of health expenditure in GDP. At the same time, the per capita GDP in these states is already over 40 thousand USD today, and at the beginning of the next decade, it is likely to be over 50 thousand (according to the IMF's latest forecasts). For Romania, in the early years after 2020, values of income per capita over 30 thousand USD will probably be reached, which would naturally correspond, in the EU space, to 9-10% allocated to heath expenditure in GDP. Compared to the current rate below 6%, there is a need for significant effort to be considered for the upcoming period. Over a 20-year horizon, given its own growth forecasting scenarios and taking into account the EU convergence program, an average of around 12% for health spending is expected in Romania.

The data we use to estimate the models presented are those of the latest World Health report (August 2016), which in terms of health expenditure as a share of GDP differs to some extent from those used according to the European Commission methodology (which aggregates public spending with private health spending). For instance, last mentioned data refer to a share of GDP of 7.9% (4.0% public and 3.9% private) for 2015.

5. Conclusion

A general real convergence was demonstrated after 2000 at the level of EU27. Within eastern group it was a strong convergence, comparing to a slight convergence in southern group and a divergence within north-western group. This dynamics could be interpreted as three behavioural regimes along with income per capita increasing. Moreover, in mater of expenditure for health, education, and research-development it seems to be a number of transitions among regimes function of the level of income per capita. Estimating the parameters of such regimes could be useful to highlight potential future trends for main classes of expenditures and to offer significant elements for orientation of budgetary policies.

Bibliography

Albu, L. L. and Caraiani, P. (eds.), 2016. Non-Linear Modeling of the Impact of the Crisis on the Interactions among Financial Markets and Macroeconomic Variables in CEE Countries. Nova Science Publishers, Inc., New York.

Albu, L.L. (coord.), 2016. Cadrul macroeconomic al dezvoltării României în următoarele două decenii (pp. 277-326), în: Strategia de dezvoltare a României în următorii 20 de ani, Volumul III, Partea a 2-a (Coordonator: Ionel-Valentin Vlad), Editura Academiei Române.

Barro, R. J. and Sala-i-Martin, X., 1992. Convergence. Journal of Political Economy, 100 (2), pp 223–251.

Carvalho, V. M. and Harvey, A. C., 2005. "Convergence in the trends and cycles of Euro-zone income". Journal of Applied Econometrics, 20 (2), pp. 275–289.

Chapman, S. and Meliciani, V., 2016. Behind the Pan-European Convergence Path: The Role of Innovation, Specialisation and Socio-economic Factors. Growth and Change, doi: 10.1111/grow.12148.

Crespo Cuaresma, J. et al, 2008. "Growth, convergence and EU membership", Applied Economics, 40 (5), pp. 643–656.

Iancu, Aurel (ed.), 2009. Economic Convergence, Publishing House of the Romanian Academy.

Martin, C. and Sanz, I., 2003. "Real Convergence and European Integration: The Experience of the Less Developed EU Members". Empirica, Volume 30, Issue 3, pp 205-236.

Monfort, M. et al, 2013. "Real convergence in Europe: A cluster analysis", Economic Modelling 33, pp. 689-694.

Raileanu-Szeles, M. and Albu, L., 2015. "Nonlinearities and divergences in the process of European financial integration", Economic Modelling, 46, pp. 416-425.

Voicu, V. (coord.), 2016. Sănătatea de la biologia moleculară la medicina personalizată de vârf în România (pp. 523-560), în: Strategia de dezvoltare a României în următorii 20 de ani, Volumul III, Partea a 2-a (Ed.: Ionel-Valentin Vlad), Editura Academiei Române.

ON A TYPOLOGY OF INFLATION[2]

Emil DINGA[3]

Abstract

The paper tries to identify and briefly examine all the possible types of inflation starting from the wrong term generally used for the concept of inflation, namely: inflation rate (i.e. the rate of general price rate) instead of inflation (i.e. the general price rate). There is here an undeniable example about what can make a wrong denomination of an economic concept for the economic theory (and, of course for the economic methodology). In the context, some qualitative analyses and graphical viewings are delivered, in order to put into evidence the features of certain relevant types of inflation. Finally, the paper cannot find the denominations for six new types of inflation, inviting the readers to make proposals for them.

Keywords: inflation, inflation rate, monetary power, inflation typology.

JEL Classification: C00, E10, E31

1. Marginal Monetary Power and Inflation

In order to define the concept of inflation we need to introduce a more general economic concept, which to express the absolute variation of the purchasing power of the monetary unit[4], between two moments in time. Let us name this concept marginal monetary power (mmp). If we note with q_t the amount of goods and services that can be purchased[5] with one monetary unit at moment „t", then we can write: $mmp_t = q_t - q_{t-1}$[6]. If $mmp_t < 0$, then we have $q_t < q_{t-1}$, which signifies the decrease of the purchasing power of the monetary unit, and for $mmp_t > 0$ we have $q_t > q_{t-1}$, which signifies the increase of the purchasing power of the monetary unit. What we usually call *inflation* is the case in which$mmp_t < 0$. The case $mmp_t > 0$ describes what we call *deflation*. Let us try to make a connection between the phenomenon of variation of the purchasing power of the monetary unit and the phenomenon of prices. Let us note with M_t the monetary mass available within the economy for the purchase of goods and services[7]. We will suppose that this monetary mass remains unchanged[8], meaning that $M_t = M_{t-1}$. Let us note with p_t the average (unit) price to purchase the goods and services from that particular economy[9]. We can then write: $M_t=p_t*q_t$. Therefore, $mmp_t = \frac{M_t}{p_t} - \frac{M_{t-1}}{p_{t-1}} = M_t \cdot \left(\frac{1}{p_t} - \frac{1}{p_{t-1}}\right)$. If $mmp_t < 0$, then $\frac{1}{p_t} < \frac{1}{p_{t-1}}$ (as $M_t>0$), hence

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[2] *An excerpt from the Chapter 8 of the author's book Rebuilding Economics. A Logical, Epistemological, and Methodological Approach, Lambert Academic Press, Saarbrucken, Germany, 2012.*

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[4] *We are referring here at the purchasing power of the monetary unit, not to the purchasing power of the monetary income.*

[5] *This is, of course, a generic, abstract possibility. For instance, some aspects are not relevant, such as: lack of the goods and services that should be purchased, or lack of will of the monetary unit's owner to exchange it for goods and services etc.*

[6] *The name of marginal purchasing power is justified by the fact that the full algebraic expression of mmp is:* $mmp_t = \frac{dq}{dt} = \frac{q_t - q_{t-1}}{t-(t-1)} = q_t - q_{t-1}$, *because we will discuss the discrete case (as it is interpreted in the statistical records).*

[7] *Obviously, this is what we are calling private consumption in the Keynesian equation of the static macroeconomic balance. We neglect here the governmental consumption.*

[8] *The interested reader may easily make this demonstration for the case in which M varies, but he/she must take care to specify whether this variation is higher or lower than the variation of q.*

[9] *Actually, not the totality of the consumption goods, rather only those consumption goods which form a basket of goods considered to be representative for the evaluation of the standard of living and quality of life at a particular moment and in a specific country. Of course, here there are several problems of methodological compatibility in time (usually solved by the reconstruction of the statistical series when the structure of the consumption basket changes) and of methodological compatibility in space (usually solved by the concomitant calculation of the harmonized index of the consumption prices).*

$p_t > p_{t-1}$. It is immediately visible that for $mmp_t > 0$ we need to have $p_t < p_{t-1}$. If M_t=1, then $mmp_t = \left(\frac{1}{p_t} - \frac{1}{p_{t-1}}\right)$. Therefore, we managed to establish a direct connection between the marginal variation of the purchasing power of the monetary unit and the variation of the average price. This connection is usually used to actually calculate this absolute variation of the purchasing power of the monetary unit, namely $mmp_t = \frac{p_{t-1}-p_t}{p_t \cdot p_{t-1}}$. At the level of the average price in year „t" the variation of the purchasing power of the monetary unit will be: $mmp_t \cdot p_t = \frac{p_{t-1}-p_t}{p_{t-1}}$.

As shown above, the current use of the concept of inflation refers to the case in which $mmp_t \cdot p_t < 0$, namely, the case in which $p_t > p_{t-1}$. The concept of inflation refers therefore to the relative positive variation of the price for the consumption goods and services from the presumed consumption basket. Therefore, if we note with p_t the average price for the consumption basket at moment „t" and with i_t the inflation at moment „t"[10], then, according to the definition we may write:

$$i_t = \frac{p_t - p_{t-1}}{p_{t-1}} = \frac{dp_t}{p_{t-1}} .$$

Generally, giving up the temporal index, we may write: $i = \frac{dp}{p}$. The advantage of this manner of writing the relation which calculates inflation (actually not the inflation, rather the marginal monetary power at the level of the current average price) is that we can use the differential calculation for qualitative and quantitative analyses of inflation and to identify all the "family members" termed as marginal purchasing power at the level of the current average price. This is what we will try to do in the next paragraph.

2. A General Typology of Inflation

As it can be noticed, the syntagm "inflation rate" (used enthusiastically by so many economic analysts, on TV shows included, where these analysts become vectors of opinion in this matter) to name inflation, meaning the decrease of the marginal monetary power at the current average price (or, with a more familiar expression, the decrease of the purchasing power of the monetary unit) is wrong, in accordance with the "canons" determined in the previous paragraph. If inflation signifies the rate of prices (their relative variation), then the inflation rate would mean the relative variation of the relative variation of prices, which is something completely different.

Here is what the syntagm "inflation rate" would mean *ad litteram*: be it three moments in time, 1, 2, 3, at which we measure the average prices p_1, p_2, p_3. We will therefore have two intervals ($[t_1,t_2]$ and $[t_2,t_3]$) in which we may determine the marginal monetary power at the current average price, which is the inflation (we can, of course, have deflation too, but we ignore this aspect for the sake of a simple demonstration, since it doesn't bring any significant changes, anyhow); we will therefore have two inflations: $i_2 = \frac{dp_2}{p_1}$, and $i_3 = \frac{dp_3}{p_2}$. The inflation rate [note it with R(i)] would mean the relative variation of the inflation, namely:

$$R(i) = \frac{di_3}{i_2} = \frac{i_3 - i_2}{i_2} = \frac{\frac{dp_3}{p_2} - \frac{dp_2}{p_1}}{\frac{dp_2}{p_1}} = \frac{p_1 \cdot (p_1 \cdot dp_3 - p_2 \cdot dp_2)}{p_1 \cdot p_2 \cdot dp_2},$$

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[10] *It is understood that there cannot be inflation at a particular moment (as there cannot be movement, in general, at a particular moment), rather it is the movement of the average price, movement measured at moment „t" compared to the previous moment. Usually, one step intervals are taken into consideration depending on the nature of the specific moment, for instance, if the moment of observation (measuring) is the year, then inflation in year „t" is measured against year „t-1", , if the moment of observation is the month, then inflation in month t is measured against month „t-1" etc. (statistically, measurements are possible for any interval for which systematic records are available; depending on the purpose of the analysis, inflations for longer intervals – multiples of the considered moment – can be observed – measured, calculated).*

therefore something quite far from the usual concept of inflation (we will see that the inflation rate will of great use, as concept, for some typologies of inflation, to be analyzed subsequently). Those using the syntagm of inflation rate instead of inflation probably think that that the notion of inflation names the economic phenomenon as such, while the notion of inflation rate quantifies that phenomenon (obviously, things are not at all like this, in this case the phenomenon and the quantification indicator simply coincide). Other people, more "sophisticated" consider that they simply translate the English *inflation rate* (serious error, which occurs in Romanian with other syntagmas too, such as *wage rate, value added tax, customs tax* etc.).

This very concept of inflation rate will help us subsequently to identify a full typology (at the conceptual, abstract level) of the marginal monetary power variations in terms of direction, speed and amplitude.

Let us resume the expression of the inflation rate: $R(i) = \frac{di_t}{i_{t-1}}$. Let us examine the possible algebraic values of this relation for three successive moments in time, 1,2,3, that is to say, for the two time intervals. The general relation between the three prices, p_1, p_2, p_3 is expressed by two real, strictly positive, parameters, α , β, as follows: $\frac{p_1}{p_2} = \alpha$, $\frac{p_2}{p_3} = \beta$[11]. Obviously, $\frac{p_1}{p_3} = \alpha \cdot \beta$.

In this case, we can calculate the following dimensions:

$$dp_2 = p_2 - p_1 = \frac{p_1}{\alpha} - p_1 = p_1 \cdot \frac{1-\alpha}{\alpha}; \quad (1)$$

$$dp_3 = p_3 - p_2 = \frac{p_2}{\beta} - p_2 = p_2 \cdot \frac{1-\beta}{\beta}; \quad (2)$$

$$i_2 = \frac{dp_2}{p_1} = \frac{1-\alpha}{\alpha}\ ^{12}; \quad (3)$$

$$i_3 = \frac{dp_3}{p_2} = \frac{1-\beta}{\beta}; \quad (4)$$

$$di_3 = i_3 - i_2 = \frac{1-\beta}{\beta} - \frac{1-\alpha}{\alpha} = \frac{\alpha-\beta}{\alpha\cdot\beta} \quad (5)$$

$$R(i) = \frac{\alpha-\beta}{\alpha\cdot\beta} \cdot \frac{\alpha}{1-\alpha} = \frac{\alpha-\beta}{\beta\cdot(1-\alpha)}\ ^{13}. \quad (6)$$

As $\frac{\partial(i_2)}{\partial\alpha} = -\frac{1}{\alpha^2} < 0$, and $\frac{\partial(i_3)}{\partial\beta} = -\frac{1}{\beta^2} < 0$, it results that there is an increase of inflation (meaning there is reflation) any time $\propto$, and β decrease and that there is a decrease of inflation (meaning there is deflation) in the opposite case. The graphical representation of this case is shown in figures 1 (theoretical representation)[14] and 2 (numerical simulation).

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[11] Let us notice that these parameters actually are relative prices, but not in the ordinary meaning of the word (relation of the monetary prices of different goods), rather inter-temporal relative prices, meaning the relation between the prices at different moments in time, but for the same product.

[12] Metaphorically, inflation might signify the speed of variation of the average price.

[13] Metaphorically, the inflation rate might signify the acceleration of the average price variation.

[14] For moment, the negative values of parameters α and β don't have, of course, economic significance, rather mathematic significance; their graphical representation only has the methodological role of revealing the signification of the strictly positive values (however, generally, a negative inflation is a deflation, as we will see below).

Figure 1 - Functional dependence of the inflation on the relative price (α or β). Theoretical representation

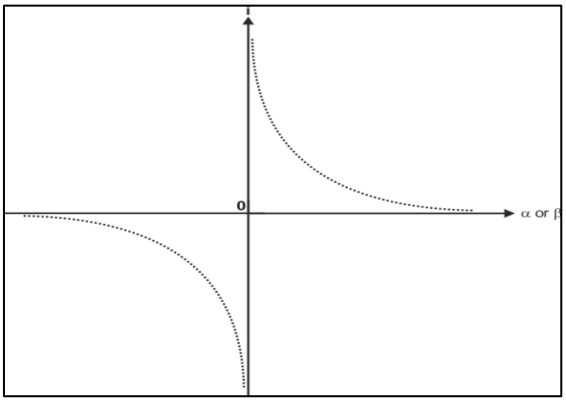
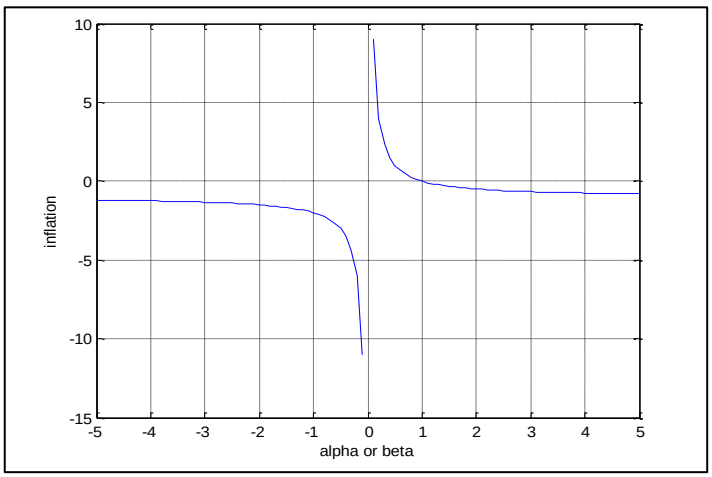
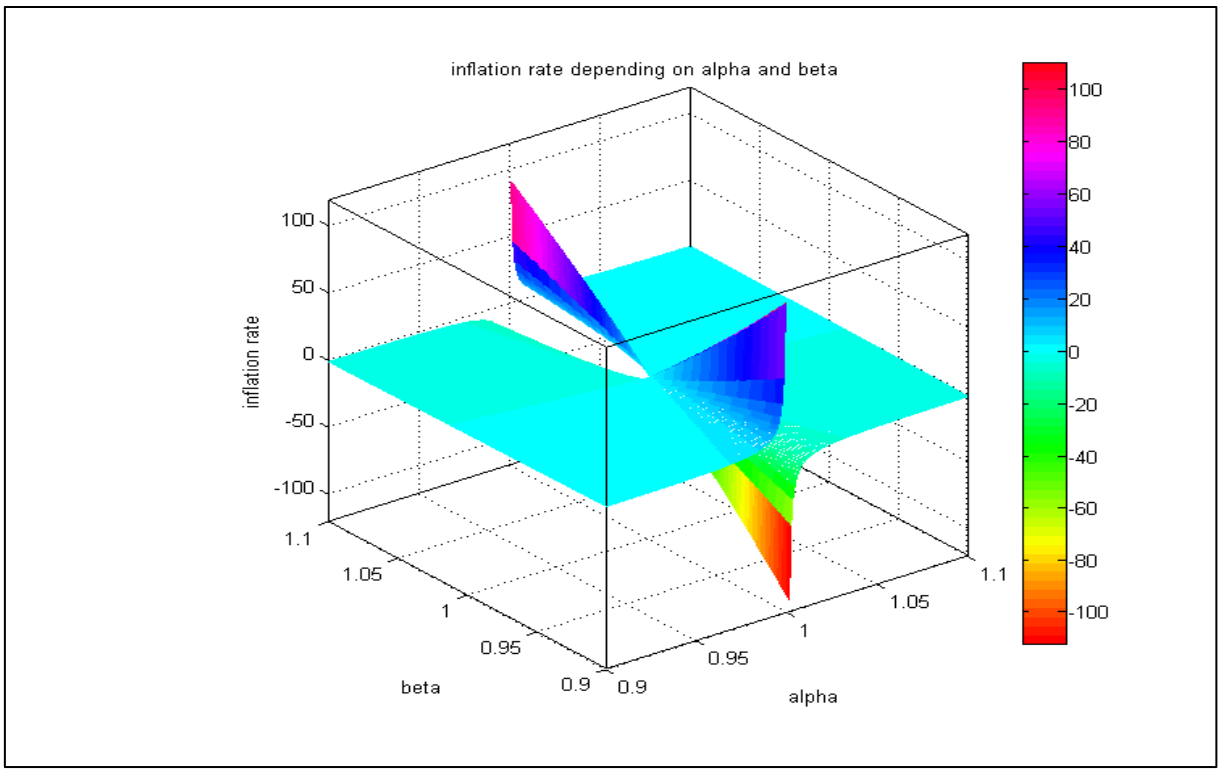


Figure 2. Functional dependence of the inflation on the relative price (α or β). Numerical simulation



The concomitant functional dependence of the inflation rate on the two parameters, α, and β, is shown in figure 3.

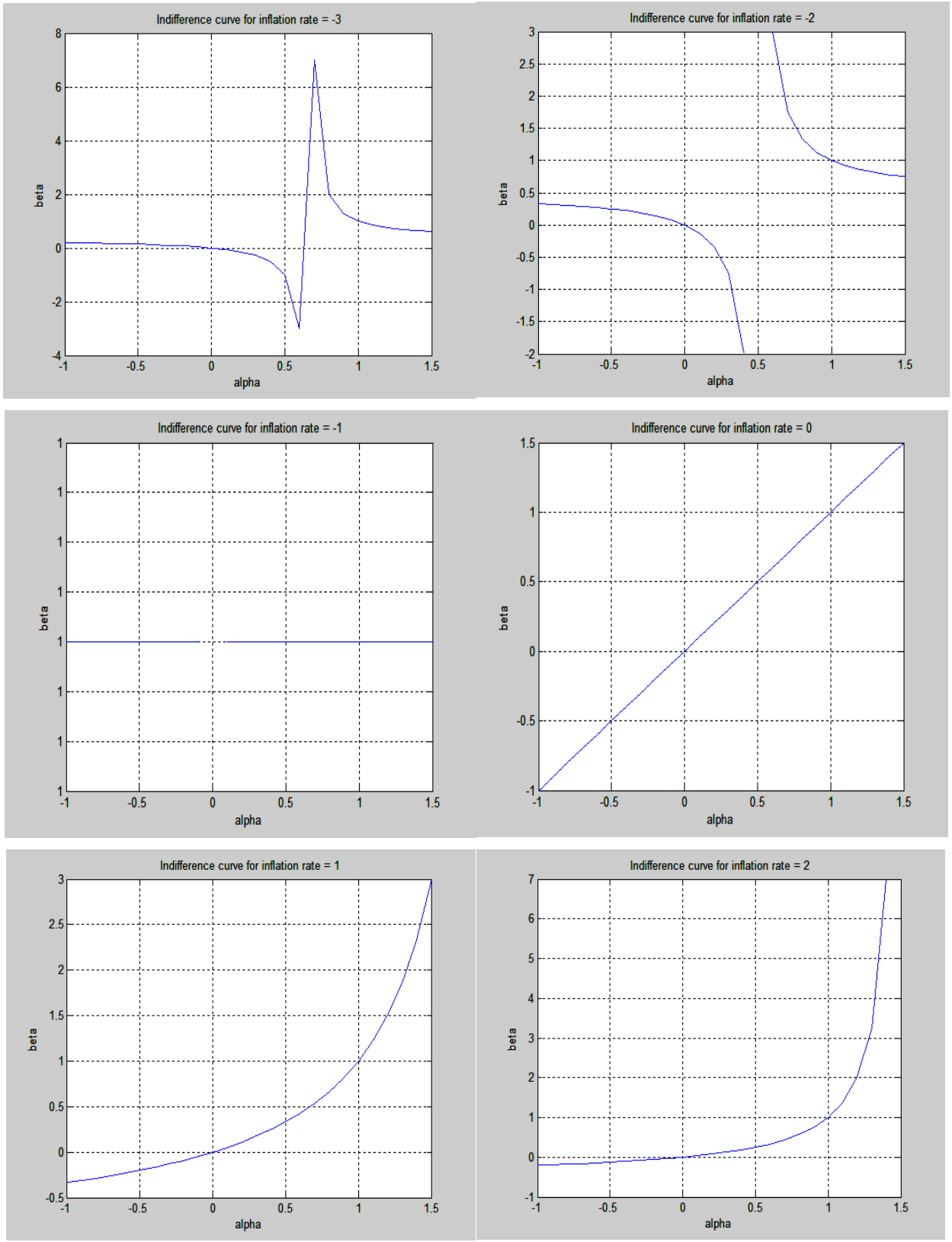
Figure 3 - Functional dependence of the inflation rate on the relative price (α and β)

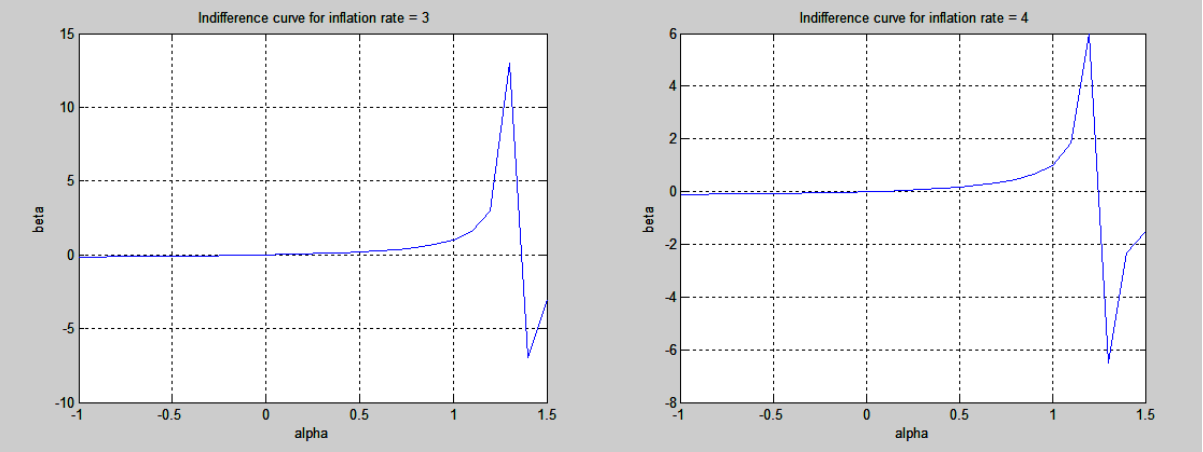


Let us determine the family of the indifference curves for the inflation rate depending on parameters α and β. Suppose that the expected value of the inflation rate is k. Then, from relation (6) we can write: $\beta = \frac{\alpha}{1 + k \cdot (1 - \alpha)}$. This is the equation of the indifference curve for the inflation rate of measure k, i.e. the set of pairs (α β) for which the inflation rate is constant, k.

The graphic representation of the curves of indifference for k = -3, k = -2, k = -1, k = 1, k = 2, k = 3 is shown in Figures 4-10 (a null rate of inflation, k = 0, presumes α = β).

Figures 4-10 - Indifference curves of the inflation rate for k∈{-3,-2,-1,0,1,2,3,4}


Indifference curve for inflation rate = -3
Indifference curve for inflation rate = -2
Indifference curve for inflation rate = -1
Indifference curve for inflation rate = 0
Indifference curve for inflation rate = 1
Indifference curve for inflation rate = 2
beta
alpha



The marginal substitution rate between α and β is determined by putting the condition of null inflation rate differential (the inflation rate must remain constant, for instance, equal to k). The calculations required to determine the marginal substitution rate are:

$$dR(i)=0 \Rightarrow \frac{\partial R(i)}{\partial \alpha}\cdot d\alpha+\frac{\partial R(i)}{\partial \beta}\cdot d\beta=0 \Rightarrow R_m^{\alpha}(i)\cdot d\alpha+R_m^{\beta}\cdot d\beta=0 \quad ,$$

where:

- $R_m^{x}(i)$ - marginal inflation rate depending on parameter „x".

Then the marginal substitution rate is:

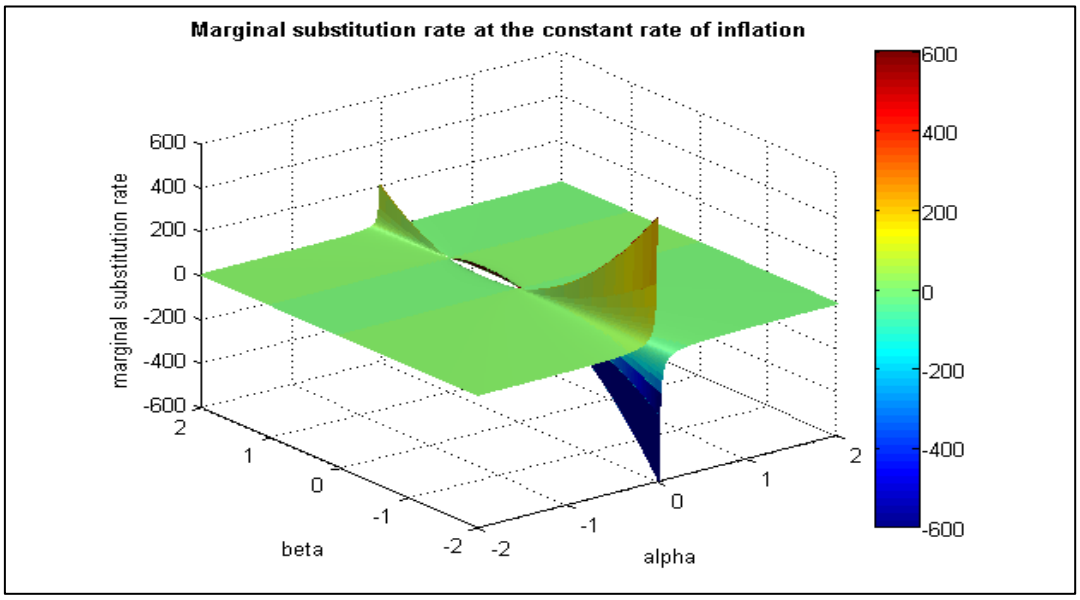
$$S_m^{\alpha\beta}=\frac{d\beta}{d\alpha}=-\frac{R_m^{\alpha}(i)}{R_m^{\beta}(i)}.$$

This is the substitution condition[15] between parameters α and β so that the inflation rate doesn't change. Let us determine concretely this marginal substitution rate. We have successively:

$$R_m^{\alpha}(i)=\frac{1-\beta}{\beta\cdot(1-\alpha)^2},\ R_m^{\beta}(i)=\frac{-\alpha}{\beta^2\cdot(1-\alpha)},\ S_m^{\alpha\beta}=\frac{\beta\cdot(1-\beta)}{\alpha}.$$

The graphical representation of the marginal substitution rate (function of parameters α and β) is shown in figure 11.

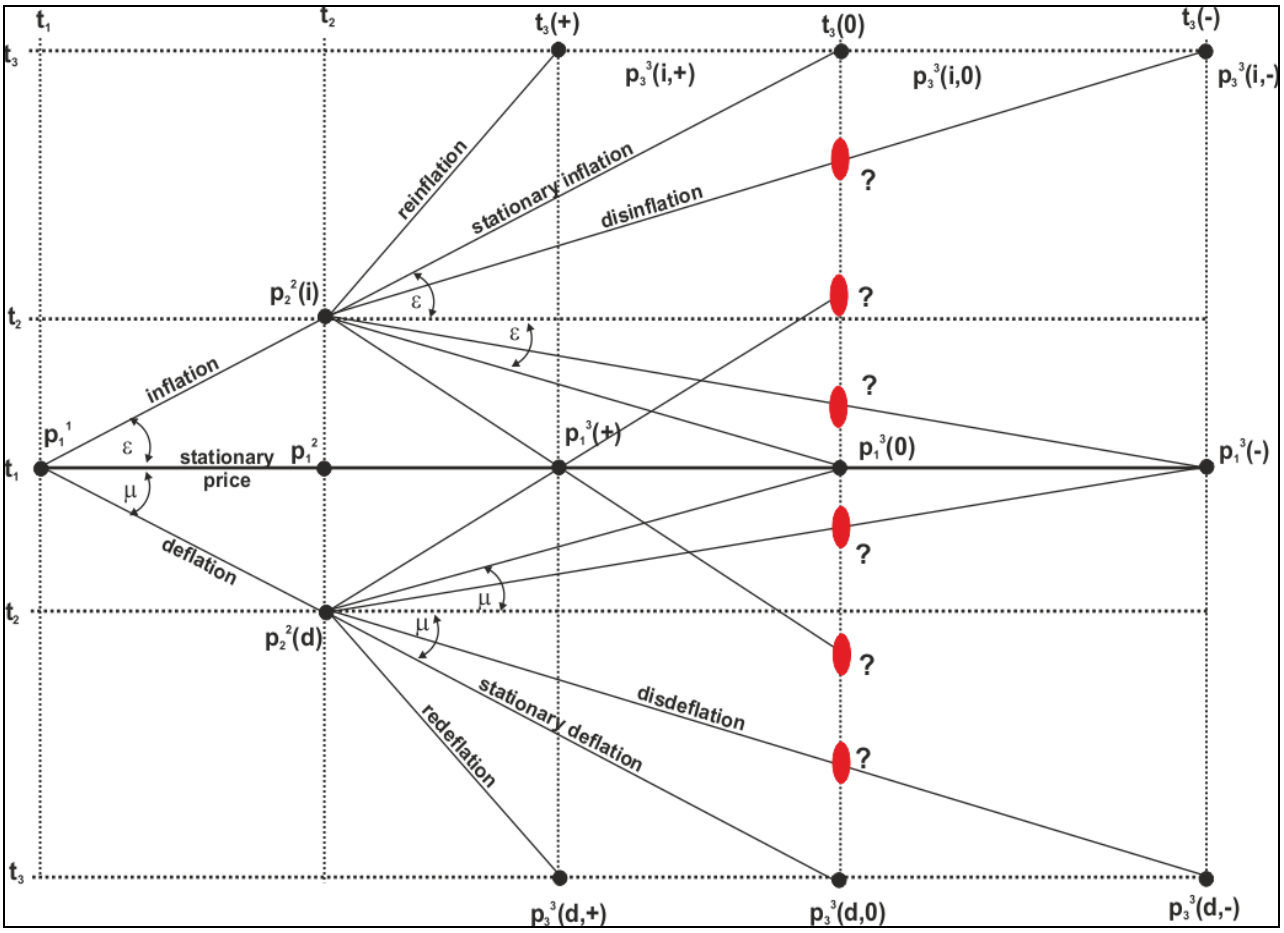
Figure 11 - Inter-temporal marginal substitution rate between α and β for a constant inflation rate



[15] *As it can easily be noticed, this is a species of inter-temporal substitution, because the two parameters which are the object of substitution refer to different time intervals (see the definitions of these parameters).*

In order to identify the typological "family" of the inflation rate, let us first consider the graphic image of all the possibilities of price evolution on two successive time intervals (figure 12).

Figure 12 - General diagram of the typology of the relative variation of the average price, on two successive intervals



Let us make the necessary calculations to see which are the algebraic conditions for α and β so that we obtain the species of marginal monetary power shown in Figure 12.

Let us note with $\pi_{12}(i)$ the slope of the line connecting p_1^1 with $p_2^2(i)$, which is the inflation slope during the first interval. We can then write: $\pi_{12}(i) = tg(\varepsilon) = \frac{dp_2}{dt_2} = dp_2 = p_2 - p_1 = p_2 \cdot (1-\alpha)$, because $dt_2 = t_2 - t_1 = 1$, by definition, in the discrete case. Let us notice, in Figure 13, that when the slope of the line joining $p_2^2(i)$ with the price possible during the second interval ($p_3^3(i,+)$, $p_3^3(i,0)$, $p_3^3(i,-)$) is higher than $\pi_{12}(i)$ we have reflation; when it is equal with $\pi_{12}(i)$ we have stationary inflation, and when it is smaller than $\pi_{12}(i)$ there is deflation. Noting with $\pi_{23}^{+}(i)$ the slope „between" $p_2^2(i)$ and $p_3^3(i,+)$, with $\pi_{23}^{0}(i)$ $\pi_{23}^{+}(i)$ the slope „between" $p_2^2(i)$ and $p_3^3(i,0)$, and with $\pi_{23}^{-}(i)$ $\pi_{23}^{+}(i)$ the slope „between" $p_2^2(i)$ and $p_3^3(i,-)$, we obtain the following necessary algebraic conditions:

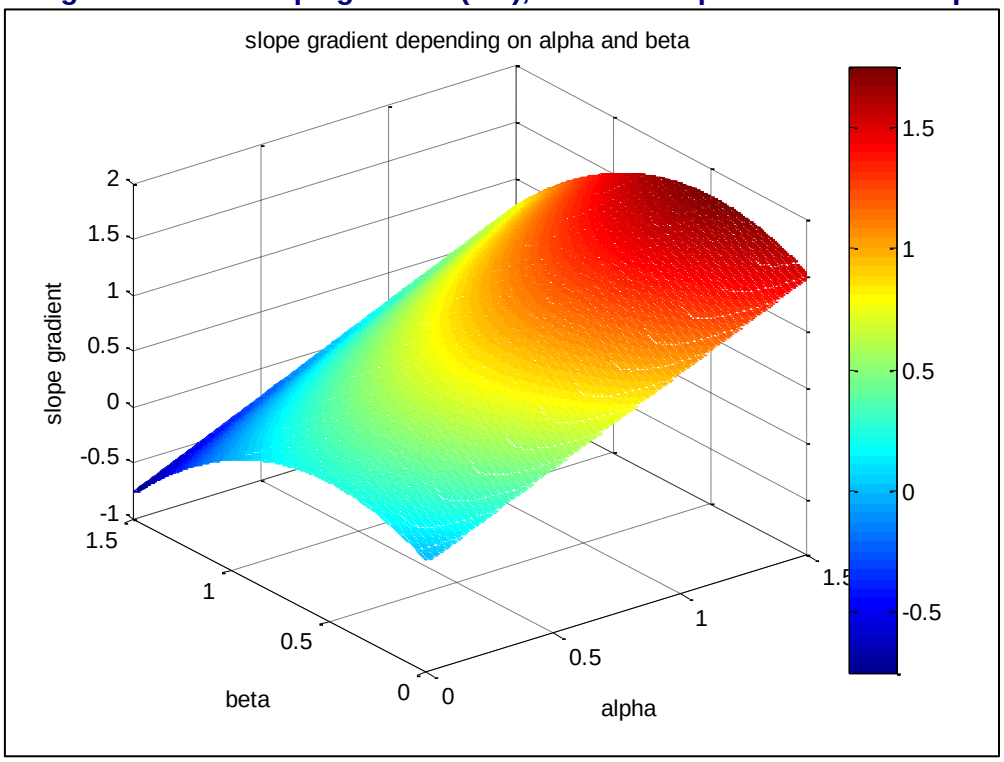
For reflation: $\pi_{23}^{+}(i) > \pi_{12}(i)$, which means $p_3^3(i,+)\cdot(1-\beta) > p_2^2(i)\cdot(1-\alpha)$, hence: $\beta \cdot p_3^3(i,+)\cdot(1-\beta) > p_3^3(i,+)\cdot(1-\alpha)$, thus: $\beta\cdot(1-\beta)+\alpha > 1$; we note expression $SG = \beta\cdot(1-\beta)+\alpha$ and name it *slope gradient*. Therefore, to have reflation, the condition is $SG > 1$;

For stationary inflation: based on the condition of equality of the slopes, $\pi_{23}^{0}(i) = \pi_{12}(i)$, we obtain the algebraic condition: $SG = 1$;

For deflation: based on the condition $\pi_{23}^{-}(i) < \pi_{12}(i)$, we obtain the algebraic condition: $SG < 1$.

The graphic expression of the slope gradient is shown in figure 13.

Figure 13 - The slope gradient (SG), function of parameters α and β



We will make an analogous reasoning for deflation too. Note with $\pi_{12}(d)$ the slope of the line connecting p_1^1 with $p_2^2(d)$, which is the deflation slope during the first interval. We can then write: $\pi_{12}(d) = tg(2\pi - \mu) = -tg(\mu) = -\frac{dp_2}{dt_2} = -dp_2 = -p_2 + p_1 = -p_2 \cdot (1-\alpha) = p_2 \cdot (\alpha - 1)$, because $dt_2 = t_2 - t_1 = 1$, by definition, in the discrete case. Let us notice, in Figure 13, that when the slope of the line joining $p_2^2(d)$ with the price possible during the second interval ($p_3^3(d,+)$, $p_3^3(d,0)$, $p_3^3(d,-)$) is higher, in absolute value, than $\pi_{12}(d)$, we have re-deflation; when it is equal with $\pi_{12}(d)$ we have stationary deflation, and when it is smaller than $\pi_{12}(d)$ there is de-deflation. Noting with $\pi_{23}^{+}(d)$ the slope „between" $p_2^2(d)$ and $p_3^3(d,+)$, with $\pi_{23}^{0}(d)$ the slope "between" $p_2^2(d)$ and $p_3^3(d,0)$, and with $\pi_{23}^{-}(d)$ the slope "between" $p_2^2(d)$ and $p_3^3(d,-)$, we obtain the following necessary algebraic conditions:

1. For re-deflation: $\pi_{23}^{+}(d) > \pi_{12}(d)$, which means $p_3^3(d,+) \cdot (\beta - 1) > p_2^2(d) \cdot (\alpha - 1)$, hence: $\beta \cdot p_3^3(d,+) \cdot (\beta - 1) > p_3^3(d,+) \cdot (\alpha - 1)$, thus: $\beta \cdot (1-\beta) + \alpha < 1$, meaning $SG < 1$;

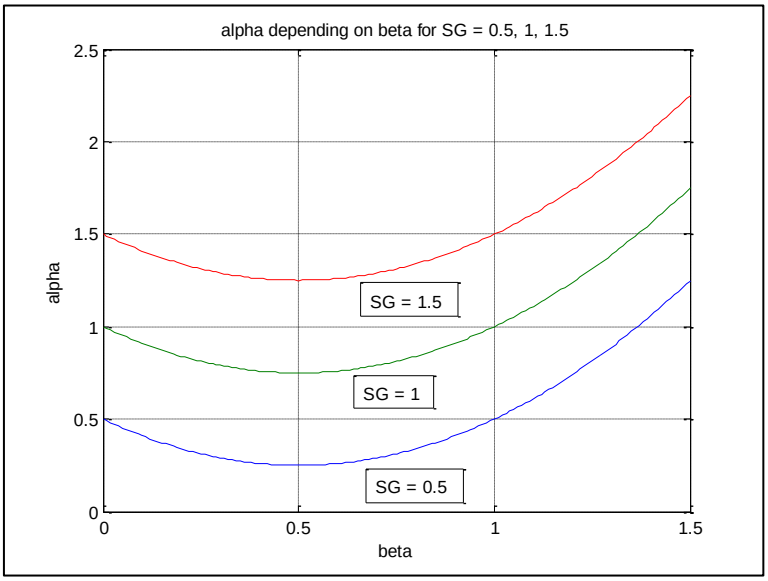
2. For stationary deflation: based on the condition of equality of the slopes, $\pi_{23}^{0}(d) = \pi_{12}(d)$, we obtain the algebraic condition: $SG = 1$;

3. For de-deflation: based on the condition $\pi_{23}^{-}(d) < \pi_{12}(d)$, we obtain the algebraic condition: $SG > 1$.

Let us observe that the reflation–de-deflation pair lies under the same algebraic condition ($SG > 1$). The same can be observed for the deflation-re-deflation pair ($SG < 1$), as well as for the stationary inflation-stationary deflation pair ($SG = 1$).

The indifference curves of SG (for the three empirical values: 0.5, 1 and 1.5) are shown graphically in figure 14.

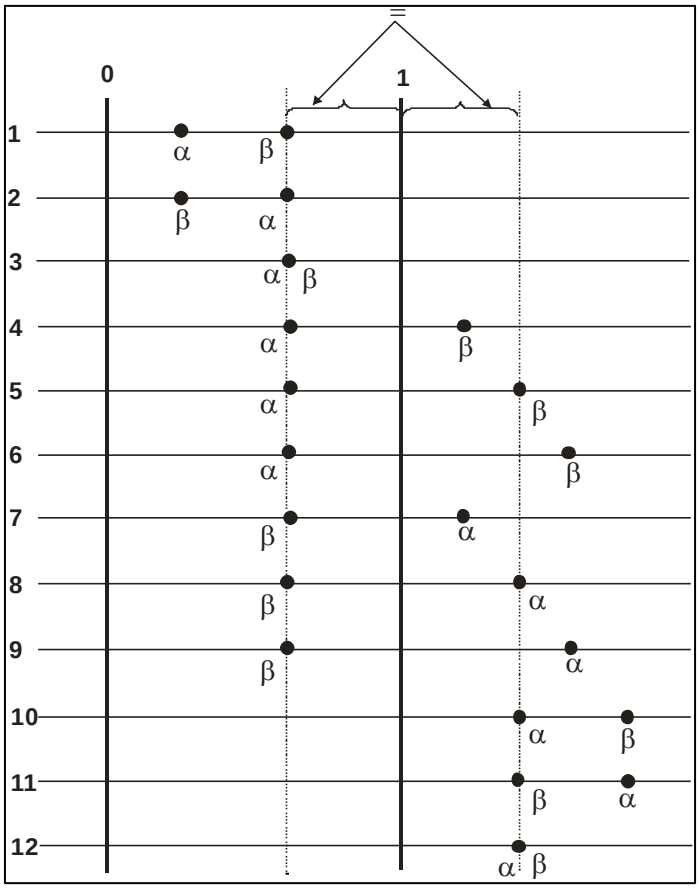
Figure 14 - Indifference slope of the slope gradient (exemplification for three empirical values)



Therefore, from Figure 14 it results that we have reflation or re-deflation on the indifference slope SG=1.5, that we have deflation or re-deflation on the indifference slope SG=0.5, and that we have stationary inflation or stationary deflation for the indifference curve SG=1.

The possible cases of relative classification of parameters α and β on the strictly positive axis of the real numbers are shown in figure below.

Figure 15 - Possible relative states, economically significant, of parameters α and β



We will make here a qualitative reasoning: as it can be noticed, the elongation of the two parameters from the value „1" is important. If we note with δ_α the elongation of α from „1" (either to the left, or to the right) and with δ_β the elongation of β from „1" (either to the left, or to the right),

then we can write successively: $|1-\alpha| = \delta_\alpha$, $|1-\beta| = \delta_\beta$. Then, we have the following formal results for the cases shown in Figure 15:

(1) $\delta_\alpha > \delta_\beta \Rightarrow 1-\alpha > 1-\beta$, meaning $\alpha < \beta$;

(2) $\delta_\beta > \delta_\alpha \Rightarrow 1-\beta > 1-\alpha$, meaning $\alpha > \beta$;

(3) $\delta_\beta = \delta_\alpha \Rightarrow 1-\beta = 1-\alpha$, meaning $\alpha = \beta$;

(4) $\delta_\alpha > -\delta_\beta \Rightarrow 1-\alpha > \beta-1$, meaning: $\alpha+\beta-2 < 0$;

(5) $\delta_\alpha = -\delta_\beta \Rightarrow 1-\alpha = \beta-1$, meaning: $\alpha+\beta-2 = 0$;

(6) $\delta_\alpha < -\delta_\beta \Rightarrow 1-\alpha < \beta-1$, meaning: $\alpha+\beta-2 > 0$;

(7) $\delta_\beta > -\delta_\alpha \Rightarrow 1-\beta > \alpha-1$, meaning: $\alpha+\beta-2 < 0$;

(8) $\delta_\beta = -\delta_\alpha \Rightarrow 1-\beta = \alpha-1$, meaning: $\alpha+\beta-2 = 0$;

(9) $\delta_\beta < -\delta_\alpha \Rightarrow 1-\beta < \alpha-1$, meaning: $\alpha+\beta-2 > 0$;

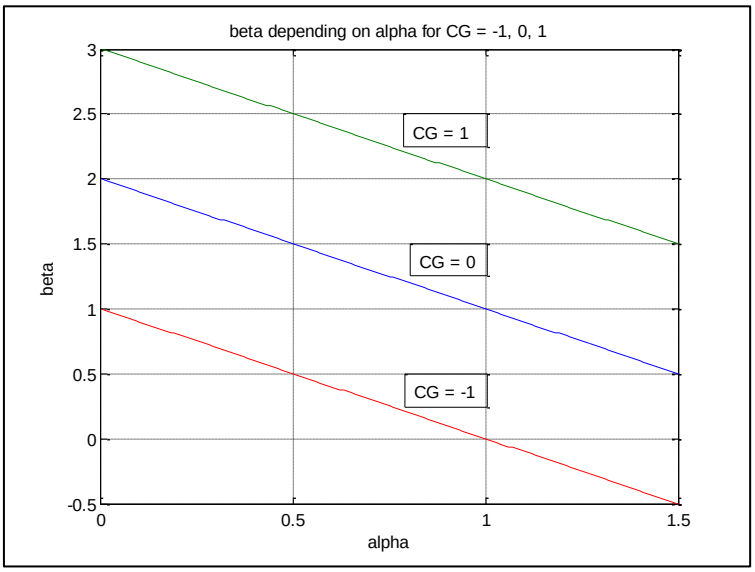
(10) $-\delta_\alpha < -\delta_\beta \Rightarrow \delta_\alpha > \delta_\beta \Rightarrow 1-\alpha > 1-\beta$, meaning: $\alpha < \beta$;

(11) $-\delta_\alpha > -\delta_\beta \Rightarrow \delta_\alpha < \delta_\beta \Rightarrow 1-\alpha < 1-\beta$, meaning: $\alpha > \beta$;

(12) $-\delta_\alpha = -\delta_\beta \Rightarrow \delta_\alpha = \delta_\beta \Rightarrow 1-\alpha = 1-\beta$, meaning: $\alpha = \beta$.

The expression $CG = \propto +\beta - 2$ will be named *commutation gradient*. As will be seen below, it is „accountable" for the under-complete (under-commutation), complete (full commutation) or over-complete (over-commutation) commutations from inflationist processes to deflationist processes and vice versa. The indifference curve of CG is shown in figure 16.

Figure 16 - Indifference slope of the commutation gradient



On the basis of the diagram from Figure 12, of the algebraic conditions determined above and of the possible topology shown in figure 15, we can systematize the possible phenomena function of parameters α and β, in the two polar processes referring to the marginal monetary power: the inflationist and the deflationist processes (figure 17):

Figure 17 - Significance of the inflation rate for the possible states of the pair of parameters α and β [16]

Case	Parameters ∝ and β	In the first interval	In the second interval	R(i) (algebraic value)	Economic significance of the inflation rate	Symbol of the economic phenomenon	„Name" assigned to the economic significance of the inflation rate
1	$0<\alpha<\beta<1$	inflation	inflation	negative	ii – decrease	i.i ↓	Disinflation[17]
2	$0<\beta<\alpha<1$	inflation	inflation	positive	ii – increase	i.i ↑	Reinflation[18]
3	$0<\beta=\alpha<1$	inflation	inflation	null	ii – constancy	i.i0	Stationary inflation
4	$0<\beta<1<\alpha$ $CG<0$	deflation	inflation	negative	di – under-commutation	d.i <	?
5	$0<\beta<1<\alpha$ $CG=0$	deflation	inflation	negative	di – full commutation	d.i0	?
6	$0<\beta<1<\alpha$ $CG>0$	deflation	inflation	negative	di – over-commutation	d.i >	?
7	$0<\alpha<1<\beta$ $CG<0$	inflation	deflation	negative	id – under-commutation	i.d <	?
8	$0<\alpha<1<\beta$ $CG=0$	inflation	deflation	negative	id – full commutation	i.d0	?
9	$0<\alpha<1<\beta$ $CG>0$	inflation	deflation	negative	id – over-commutation	i.d >	?
10	$1<\alpha<\beta$	deflation	deflation	positive	dd – increase	d.d ↑	Re-deflation
11	$1<\beta<\alpha$	deflation	deflation	negative	dd – decrease	d.d ↓	Disdeflation
12	$1<\alpha=\beta$	deflation	deflation	null	dd – constancy	d.d0	Stationary deflation

From figure 17 one may notice an interesting aspect: we may have phenomena of reflation and de-deflation both within an inflationist process and within a deflationist process. If, for the inflationist process, the names of reflation and deflation describe the phenomena of acceleration and deceleration of the average price variation (the phenomena of increase, respectively decrease of inflation), for the deflationist process we need to introduce similar concepts. We will do it immediately. Thus, a reduction of deflation would mean the decrease of the average price variation, which is a deceleration at decrease. Since the deceleration at increase was named deflation, a mirror concept for the deceleration at decrease might be called *disdeflation*. Similarly, as the acceleration at increase was named reflation, a mirror concept for the acceleration at decrease might be named *re-deflation*. When adequate (and, of course, justified and suggestive) denominations will be found for the other six theoretically possible cases, we might have, as it looks to us, the complete notional family of the concept of marginal monetary power. The basic notions[19] concerning the concept of marginal monetary power are presented graphically in figure 18.

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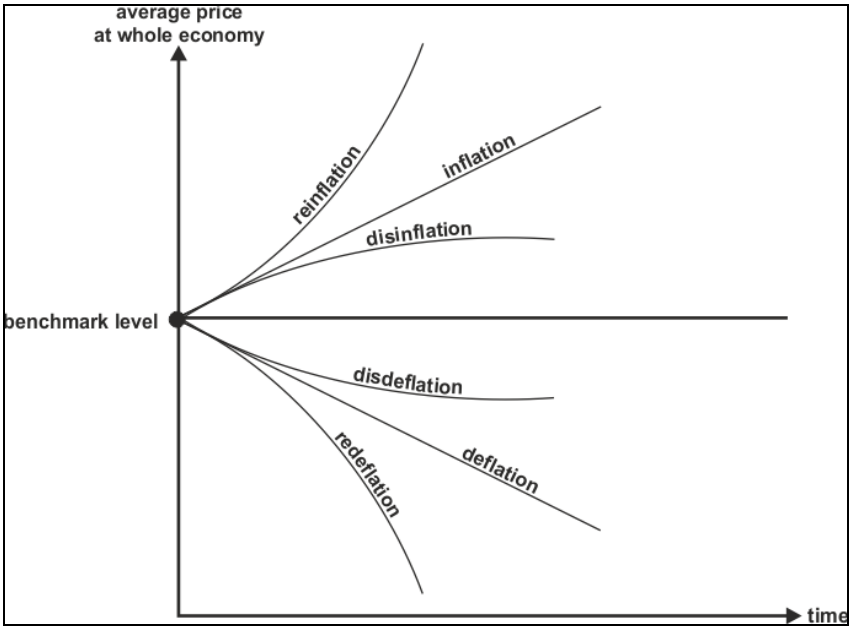
[16] As it can be noticed, we still have to "invent" six notions in order to describe completely the theoretical phenomenology of the inflation rate. We leave this pleasant task of "Godfather" to our fellow scientists who are also concerned with the conceptual matters related to the inflationist/deflationist processes from the economy.

[17] Therefore, conceptually, deflation signifies the decrease of inflation (or, if we assimilate, metaphorically, inflation to the speed of price increase – which is not mathematically rigorous – deflation signifies the deceleration of the average price variation).

[18] Therefore, conceptually, reflation signifies the increase of inflation (or, if we assimilate, metaphorically, inflation to the speed of price increase – which is not mathematically rigorous – reflation signifies the acceleration of the average price variation).

[19] It is readily noticeable that the six notions waiting to be endowed with the adequate terminology are derived notions (thus, non-fundamental), in relation with the six notions already presented in Figure 15.

Figure 18 - Notional family of the concept of marginal monetary power



If we would want to continue the metaphor regarding the definition of inflation/deflation and of the basic notional species using the notions of speed/acceleration in relation with the time (time is considered here as non-causal benchmark variable), then we might have the following analytical description (figure 19).

Figure 19 - Derivative conditions of the inflationist/deflationist phenomena

No.	Process	Phenomenon	Algebraic sign of the first derivative of the average price in relation with the time	Algebraic sign of the second derivative of the average price in relation with the time
1	Inflationist	Reinflation	+	+
2		Inflation	+	
3		Disinflation	+	-
4	Inertial	Stationary state	0	
5	Deflationist	Disdeflation	-	+
6		Deflation	-	
7		Re-deflation	-	-

IS REFORMING THE EU AN OPPORTUNITY FOR ROMANIA?

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Abstract

Romania has to comply quite fast with the documents produced and published by the European Commission with regard to the future of the European Union. The authors are advancing some ideas that Romania should consider reforming the EU as a good opportunity to think about the directions of the reforms enabling the Union to become stronger economically and politically, but in a more united manner, with Romania in, and all partners should consider seriously the principles of solidarity and cohesion. The disrespect of these, echoing in the lack of political discipline in many economic and social engagements regarding the UE as a whole and every member state individually, was the main cause of the EU crisis opening doors for financial crisis and euro crises. Romania has to take the opportunity to be closer to the making decision process with the goal to reposition and to use all the instruments to take real active part in designing and driving the future of the EU as Romania`s European and global future is strongly linked to EU.

Keywords: macro-stability, EU reforms, EU integration, convergence

JEL Classification: E02, E61, E65

Alan Bennett, a British dramatist and screenwriter, dared to remind all his fans a profound truth about the ripe time to take a decision: "*Sometimes there is no next time, no time-outs, no second chances. Sometimes it's now or never*". We think in the same terms, when we live a dramatic time of reinventing the EU, in order that community of states continues realizing the incipient political project goal, a Political Union. It does not matter when, but just to keep the compass towards that goal, building up the necessary institutions to remain ahead on the road. The dramatic time comes after a hard period for the EU, following the fight with and recovering from the financial crisis and its subsequent impacts, mainly the developing Euroscepticism and the illiberal political movements, both capable to dismantle the EU. While de danger of both has been prevented by a series of election results in some important EU member states - as the Netherlands, France, Germany - new paths for the future of the EU were open with those five scenarios developed by the European Commission and those five reflection papers delivered on: defense, EMU, finance globalization and social standards. The meaning of all these have to completed with the latest speech of the president Jean-Claude Juncker on the State of the Union (13th September, 2017), marking a synthetic offer to all the EU members. The core issue is what should be the better way to tackle with the destiny of the EU, in the present European and global context.

Romania has the right and the obligation, as a state member of the EU, to deal with the mentioned offer; in our opinion the best message being a more united Europe, Romania included. Such a position is based on hard considerations: Romania has to assume a new proactive attitude to reach the decision table of the EU and to be involved directly in the decision making process of the Commission with relevance to its own interests. It means that, as the core nucleus of the EU is enjoying more attention from now on, Romania has seriously to consider becoming a member state of Eurozone. We should remember that the fate of the euro, during the harsh time of the financial crisis, was linked with the fate of the EU and all the measures put into practice were serving the salvation of the common currency. We are quite straight in our opinion regarding the choice to be made by Romania, because reforming the EU is a real opportunity for a new deal with a so-called multispeed EU (it was always) and that opportunity is working in favor of Romania in a limited span of time.

The authors are expressing a real concern about the lack of interest of the public, in the move Romania has to do soon, except for some general political statements referring mainly to the opposition to a multispeed Union. It seems that the propensity of almost all media to panic the

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population on different speculative issues is more important at these crucial times. For Romania, the future of the most important European political project for becoming part with great efforts is paramount. But it seems that a lot of those speculative issues debated every day can reach a resolution only by serious debates exactly on the future involvement of Romania in designing the destiny of the Union. Those debates can help Romania to leave the peripheral place for a core once within the Union.

We are talking about Romania as a full-fledged member state of the EU, with equal right, having to choose between remaining a contemplative one or a proactive one in the concert of EU`s decision process. The opportunity window is narrow enough to lose it and only a constructive and positive approach, more in an academic mood and enough courageous in arguments, is to prevent speaking more about the complexity, difficulty, risks, unpreparedness, etc. revealing in fact our helplessness. Are we really talking about helplessness or we are in the trap of wrong messages?

We don't want to give an answer either, but to insist that the opportunity is worth to turn things to good account. Romania has the chance to get out from a "cone of shadows" represented by not being yet a member of the Schengen Area or having problems with rule of law and corruption. We think that those ten years of full EU membership of Romania, provide any good negotiator with a lot of arguments for promoting both Romanian and EU interests, this time probably on a more reciprocal basis. From this point of view, we move away even opposite to a series of many other positions expressed in public on our propensity to reach the core of the EU, mainly on adopting the common currency – euro. Too many doubts, fears, difficulties, risks or theoretical economic thesis are evoked in an endless cascade, trying to discourage any positive attempt for more action needed both at home and abroad, along with better institutional capacity and capability to tackle with the issues of a genuine political project.

To many of us, the opportunities seem to be easy to be defined, but they also need to be treated with the responsibility of making them to work for Romania while the debate for more or less Europe is acute. The "European Moment" for Romania, as we use to call these opportunities, is linked to reaping the benefits of a complicated geopolitical situation facing both the EU and Romania. This situation is forcing us to look and link us with a Union eroded by a series of economic and political crises and to be part of the healing process.

Responding to the goals of reforming the Union is crucial for the continent and global stability and securing the peace is an absolute priority. That is why Romania has to strengthen and to use all the potential anchors of her belonging to the EU and NATO. They are not to be discovered or invented now, but to comply to the standards of the existing ones.

The problem of more or less extensive Europe is now of interests and it is not any longer just a subterfuge of the politicians. It is about the quality of the European governance which still allows other member states to organize an exit referendum or to exert pressure for territorial secession. The bulk of motivations can be reduced to the mere fact that either the principles of governance at Brussels have no more consensuses, or the contributions to financial resources of some member states are too high as compared to the loose responsibilities of the countries that benefit from.

The alternative source of distress is of high interest for the European leaders and the only way to repair it is to come with political declarations that European integration should be deepened mainly by mutual cooperation. It is a pity that when the issues of different basic unions (fiscal, defense, political) needed for the better functioning of the single market or the euro were mentioned by high-rank officials, usually in a low voice, we were sure that those things would be delayed, even *sine die*. The evident adjournments expressed by some of our (usually powerful) European partners are not of good omen for anybody, especially when we pretend to look after the future of the Union. For sure, it is not the kind of a choir singing to the benefit of Romania as Romania did not accomplish all the integration instruments available, and this is not entirely its fault.

As we have revealed, the future of Romania cannot be dissociated from the political European project, defined as the EU, either in terms of European security or global stability. To be on the both fronts, Romania needs be part of a strong Union. From this point of view and looking at the historic stages of its *suis generis* modernization (from the 1848 revolution, passing through the Union of the Romanian Principalities, the reigns of the kings Carol I, Ferdinand I, Carol II and the systemic transition after 1989), the Association Agreement (1993), joining the NATO Treaty (2004) and UE Treaty (2007), all have given chance to Romania to be associated with the grandeur of the

of political, economic and defense umbrella mastered for peace security in Europe after World War II. It is all about the need to perform in an environment full of stimulus, provided that Romania should re-embark (after consistent efforts in negotiating a new European position) more actively on the present road of continuing the European integration. The context is that Romania should ”deliver” more for the future fate of the EU, engaging from inside in the reforming the EU in a loud and credible voice.

Romania is in great need to continue its modernization in many areas of common interest and to be able to raise structural funds remains important. Brexit, irrespective of the diplomatic words used for describing the “*the constructive and friendly atmosphere of the negotiations*” has to end in three issues: citizens` rights, the Irish border and the bill of divorce. This will affect the weak economic members of the EU. Romania has to show that it can sustain its macro-stability while fulfilling the Maastricht criteria and almost all economic indicators included in the European Semester assessment. Romania is prepared technically to join the Schengen Area and is complying with the state of law. Romania can tackle with global risks as a strong member of EU.

Romania is encouraged by Mr. Juncker, the president of the EC (scenario six), when he says that his vision put into a scenario is rooted in decades of first-hand professional experience working for the European project. Maybe it is too ambitious for Angela Merkel who is ready to amend more promising facts wanted by him and Emmanuel Macron. But his speech deserves our attention in many respects. Juncker, from the high tribune of the European Parliament, rejects a multispeed Europe in favor of uniform steps to be taken by all EU members and this would mean for a state member, as Romania, expanding the Schengen Area with its inclusion.

As to the euro, Juncker says that the common currency has to unite and not to divide the Union. It means that euro is to cover the entire space of the Union and not only a group of “select” member states. Juncker`s vision that the EU will focus on strengthening the euro for its existing members, it will become more attractive for outsiders. The member states that want to join the euro and are able to do so would be helped with a promising euro accession instrument, offering technical and even financial assistance. In the meantime, completing the Banking Union is a matter of urgency in terms of reducing the remaining risks to the financial stability of the member states and its functioning means that risk reduction and risk sharing go hand in hand.

It should be observed that steps to be taken from top to bottom, e.g. from politics to techniques is the way how Juncker sees a Union of values, freedom and equality that can reunite us in a strong Union with less visibility of the different speeds of integration. Notwithstanding the possible controversial outcome of Juncker`s speech, Romania has to defend the principles of a such vision just to reduce the subversive critics holding back a firm march to integration. The European Commission is in stand-by after Junker`s speech, probably waiting for the decisions of the December 2017 European Council when Germany will have a settled government; but in order that Angela Merkel succeed many amendments will be done to her previous political statements.

It is obvious that the exit from the financial crisis, due to some brutal austerity programs and many other restrictive measures applied to some member states, Romania and the EU as whole are confronted with limited political and economic resources, but we witness a steady recovery of them after the latest elections. This creates a helpful environment for the future political negotiations for a road map of the EU, not excluding new dimensions of economic and political competition. Romania has to embark rapidly on such a competition and such a positioning has to come along with an offer of credibility and the resources to justify it. A new national political consensus is again needed. We call it a structured political consensus because it has to refer not to a belonging which has been accomplished, but to a new stage of European integration in which Romania should engage to overcome the peripheral position revealed by many ranking indicators. Unfortunately, they are keeping Romania in the last place within the EU even after 10 years of full-fledged membership. Something has to be done and we invite the political class to tackle the matter within the described opportunity.

The three principles on which a promising more united, stronger and more democratic Union should be based is suggesting why, for us, the formula of more Europe with Romania in is the best. We have to succeed to embrace the proposed scenario with a rapid shift to the fifth one, e.g. from DOING LESS MORE EFFICIENTLY to DOING MUCH MORE TOGETHER. The alternative is seriously described by Juncker: We have two options, to reunite us around a positive European

agenda or each of us to remain where it is. So, the European Moment is a historical one, either a challenging or provoking one which means isolating us is a historical mistake.

Beyond any risk, adopting euro is a strategic target which needs an immediate tactic approach, keeping in mind that we should be interested in reforms of EU governance that enhance its strength and resilience, in regional cohesion and nominal convergence and real convergence. But this is a process and the question is whether we are waiting it to be improved while Romania remains at periphery, or to strive to be closer to the hard core of the EU? It is for sure a process to be accomplished, but **we have to understand that initiating any process also needs a moment zero to take a decision and a devoted political and professional team to reach the target. That is the point we are insisting on, to take a decision, to launch the arrow!** Otherwise we are talking and talking only about lack of preparedness. We see around us many speaking, in long complaining discourses, only about risks, so the straight invitation is just to “wait and see”.

Two things have to match at present: the reform of the Union and the good shape of Romania`s macro-stability. In both cases we are confronted with the speed: the clock for the availability of the window opportunity to be turned to good account is ticking and keeping Romania`s macro-stability can be at risks in short time.

For Romania, to maintain in good shape the macro-economic equilibrium is paramount and the task is in the hand of the political and economic decision makers. This goal means sustaining economic growth on long term for more convergence, and high growth to be translated into a high catching-up process. In an interdependent world we cannot do it alone, and to become a closer partner to the EU, aspiring to the Eurozone, is obviously more helpful. Looking ahead, Romania is not prepared to overcome a possible new international crisis announced by many, just because it needs more instruments to absorb shocks or mechanisms to manage the effects of a crisis. In this respect we have the choice to go to the EU or the IMF, but as a state member, Romania probably has to address the EU, which nowadays is better prepared to help, provided that we become member of the Banking Union and a founding member of the future European Monetary Fund. Addressing difficulties with the IMF, usually affects our progress in deepening European integration.

Contributing to and benefiting from the schemes and mechanisms developed by the Banking Union, by sharing risks, a mechanism to reduce the risks, a resilience fund, the best oversight rules and, finally, the decisional process which refers even to the Supervisory Board within the Eurozone, etc., Romania may sustain the macro-economic stability with an impetus on improving convergence standards, a prerequisite to become a full member of Eurozone. Before joining the Banking Union we have to do some important homeworks, so that national banking system is better capitalized and supervised, with less pressure on Romania`s fiscal situation.

We need to think strategically and fix the targets sometime in future and to come all the way back to embark on what to be done in order to reach the targets. It is obvious that the monetary integration is more than adopting the euro because it implies fiscal integration. We think that Romania can afford fiscal integration, expressing an interest in taking early steps for achieving a Financial Union at the Eurozone level. The credibility of such an engagement is given by the role of the central bank in maintaining the financial stability by guaranteeing its single target – price stability – and its independent monetary policy for a fluid transmission of the monetary impulse.

Considering the mutually reinforced correlation between nominal convergence and real convergence by a dynamic compromise in macroeconomic policies, oscillating, in fact, between domestic stability and external vulnerabilities, we think that entering the ERM II will be of good omen for supporting macroeconomic stability of our country. The success in ERM II is at least for two years, by eliminating pro-cycle fiscal policy, and it will confirm the economic convergence sustainability and in advance contribution of Romania to the functioning of the single market, looking for the adoption of the euro. If we block ourselves now because of the costs (contributions to different resolution funds as instruments to minimize risks in a potential new crisis), these costs will be greater later.

We believe that the European Moment is giving us a chance for a ”package approach” in order to fix our governance for more European integration in a new political dialog with the Union. We do believe that techniques fade before of the political and geopolitical peril, which the Union is facing. Any way toward a better qualitative approach of the European integration should be based *a priori*

on strong political will of all member states and Romania has to do the same if we want to continue the path opened by Treaty of Rome (1957). In order that everything should happen in a scenario in which Romania is approaching the core structure of pertinent decisions within EU, we come back to the issue of the security of the entire EU structure needed in the uneasy geopolitical context and the crisis to come.

There is no doubt that Romania is ready to be an active state member in a Defense and Security Union as regards the three components: a global strategy of the EU in security and defense domains, an action plan for defense and cooperation with the NATO. Romania has already its own responsibility choosing among the scenarios to contribute to an authentic Union of security and defense, in concordance with an ambition level which has to reflect her own security by participating in more common security activities with other member stats. In this field we have to be actively engaged, because when the next clouds appear on the horizon – and they will – it will be too late.

Romania should be vocal pro and con with all the types of scenarios delivered officially in so far, and being attentive to all sorts of amendments invoked by the EU strong partners. Why? Because themselves started already to complain in an unreasonable way that they should do more **if the week partner can do more domestically on its own** before trying to be closer to the core of the decision making process of the Union. An example is the Banking Union. The Commission is already responding to the concerns of Germany and others, which fear being saddled with the consequences of their partners' financial mismanagement. The subject was, as usually, the collective bank deposits, a resolution scheme which is badly needed. The new concept developed for the hot issue failed short as it was leaving too much risk with national governments, which is the most discussed critical weakness of the Banking Union. We have understood that the Banking Union cannot work without closer collaboration and risk sharing.

Romania has to draw attention to the way some partners are looking for solutions, just because the economic state of the Union is good now, but with a new possible crisis knocking at door, returning to the critical times which pushed Union for immediate reform. There is a feeling that what was considered proper and urgent solutions is now tempered because of former fears just at the moment when the UE economy is increasing its own resources. The example is given by Euro Zone Banking Union. The European Commission is striving for collectively insuring bank deposits, as Germany and others fear being saddled with the consequences of their "*partners' financial mismanagement*". That fear is understandable, but the way of expressing it seems offensive to the others. The question is why does partners' financial mismanagement exist when we accept that EU is a community of laws? Where and who is mistaking?

Romania has to reveal that continuing with "*partners' financial mismanagement*" is unfair and it means maintaining the *status quo* of central and peripheral countries in terms of development. Can we talk about the general convergence with less help from our partners? The answer Romania waits for is not in any case what Kornelia Kirchweger, editor of *Wochenblick*, said after Sebastian Kurz`s victory in Austria: "*the rich countries (like Austria) are to pay for the poorer countries. This 'EU social assistance principle' is called 'Cohesion' in specialist jargon*". Is EU a charity organization?

The *per se* matter of convergence refers even to the Eurozone, where "*economic and social divergences matter for the euro area for its daily functioning but also for its political acceptability*," says European Commissioner for Economic and Financial Affairs Pierre Moscovici in a recent a speech on September 19th this year. The question of disparities is common to Romania and the Eurozone and the solution is the same: wealthier and poorer Eurozone countries (similarly with Romania`s counties) must equalize their living standards if the single currency (or leu) is to receive necessary political support for regional development. The danger to a deep integration, in terms of any scenario, is adding to a wave of anti-EU populism, fueled by voters` uncertainty over the effects of globalization.

We believe that the *political acceptability* of anything which can help to achieve a stronger Europe has to be understood with greater effects on real deeds for implementing cohesion principle. That is the drive for Romania to engage more, but again to come closer the EMU. What will be good for the EMU should be good also for countries expressing their desire to join the Eurozone. Our understanding of what Moscovici means is that "*the Economic and Monetary Union (EMU) is our*

main tool for convergence in the Euro Area," and it should be shared with all member states, because the promise of shared prosperity was central for the creation of the Union as a whole and not only for the Eurozone.

Romania's integration is obliging us to become stronger economically by ourselves, but the need for political correctness of cohesion, more economic security provided to Romania with the tools of the Union means more general security for the Union. So, we have to assume a "package" of decisions and proposals covered with the credentials of maintaining macro stability and stability of the exchange rate of the leu, but using Union`s resources and the Union can afford them. Going elsewhere will have the connotation that we depart from the Union. The accession to the Eurozone and politically admission of it is the only truth in embracing the future of the EU. Euro adoption is to have the real vehicle to join our partners for a stronger economic and political Union. Good or wrong intentions provide the best arguments for the political urgency in adopting the euro and they should be negotiated for a start of the process. That will be the best incentive to be ready at the right time. Otherwise, we will talk only about possible schedules without doing anything.

The technicity of adopting the euro is well known in Romania and others should take care of that, but the main political decision is to enter the ERM II and not wait for a complete convergence which will never be achieved, just because this will always remain a process in progress and in competition. Let's take seriously the fact that the euro has the vocation of a common currency for the entire EU and this is the strongest instrument which can unite us in an authentic Union of values, more powerful and more democratic.

If the EU places the euro ahead of a political union, but succeeds in creating a wonderful single market, why cannot we put the euro at work for the needed convergence in every respect for a stronger and united EU?

Bibliography

Dăianu, D., Kallai, E., Mihailovici, G. și Socol, A., 2017*, România și aderarea la Zona Euro: întrebarea este în ce condiții!*, Academia Română.

Georgescu, F., 2 iunie 2017, *Creşterea economică, dezvoltarea României şi reducerea sărăciei,* disertaţie susţinută la Universitatea „Valahia", Târgovişte.

Isărescu, M., 2015,"Convergența nominală versus convergența reală", Conferința *Calea României către Zona Euro,* organizată de Reprezentanța Comisiei Europene și BNR.

Lazea, V., 2016, *România competitivă*, Comitetul de pregătire a trecerii la euro, BNR.

Vesely, Lukas, aprilie 2017, "Can Europe Converge on What Convergence Should Mean", *Social Europe.*

Voinea, L., 2015, *O perspectivă asupra foii de parcurs pentru adoptarea euro*, Comitetul de pregătire a trecerii la euro, BNR.

* * *, Comisia Europeană, COM (2017) 315, Document de reflecție privind viitorul apărării europene, 7 iunie 2017

* * *, Comisia Europeană, COM (2015, 2017), Raportul celor 5 președinți, Documentele de reflective, Scenariile privind viitorul Uniunii, State of Union

FINANCIAL STABILITY AND MACROECONOMIC BALANCES: CHALLENGES AND PERSPECTIVES

Eugen Rădulescu[22], PhD

Abstract

Financial stability is a global public good characterized by non-equity and non-exclusion. This public good cannot be offered exclusively by the market, the central bank and other state institutions playing an important role in ensuring financial stability. Also, given the open economy of Romania, a cross-border approach is needed, by coordinating policies in this area, in order to achieve financial stability at national level. The National Bank of Romania designs macro-prudential policy strategy within the limits of its area of competence. The macro-prudential policy objectives of the NBR, fully harmonized with the European recommendations in the field, are: (i) to reduce and prevent excessive credit and debt growth; (ii) reducing and preventing excessive maturity mismatches and lack of liquidity on the market; (iii) limiting the concentration of direct and indirect exposures; (iv) limiting moral hazard, and (v) enhancing the resilience of financial infrastructure. In order to meet the ultimate goal of safeguarding the stability of the financial system, the NBR selected, in addition to the interim macro-prudential policy objectives at EU level, two specific national targets - sustainable growth of financial intermediation and improvement of financial inclusion - for which it proposed specific instruments.

Keywords: financial stability, macroeconomic and sustainability

JEL classification: E44, E63, Q01

Introduction

The National Bank of Romania carefully monitors the stability risks and pursues, through the macro-prudential policies it has adopted or on which is preparing to adopt them, reducing the risk of over-indebtedness of the population. At the same time, the NBR considers that borrowers would be better protected in the medium term if they were require more to conclude fixed-interest credit agreements. Also, within the National Macro-prudential Supervisory Committee, the NBR highlighted the risks to financial stability stemming from constraints weak budget in the economy. To strengthen the economy's resilience to external shocks, especially on credit risk, requires a prudent and balanced mix of policies economic recovery, aiming at returning to the medium-term budgetary objective (reducing the structural deficit) and improving the discipline of payment in the economy.

Methodology of Scientific Research

The methodology of the paper will have as direct instruments the collection of data and information from specialized literature and from existing practice in public and private institutions, but especially scientific articles published on specialized research networks, articles published in different journals, relevant books in the field of reference, legislation, analyses and studies, official documents of various tax bodies, tax documents and interactive database of the National Bank of Romania, other relevant sources identified at the libraries: CCFM, Academia Romanian, INCE, IEN, BNR, National Library, INS, etc. Moreover, in the methodology we will analyse the documents using the comparative, analytical, descriptive method, no participative and participatory observation, and the use of a set of informational sources, the collection of financial data in the established databases. Also, the paper will be based on annual reports, publications, consolidated statistical data provided by the National Bank of Romania, the European Central Bank (ECB), the International Settlement Bank (BRI), the European Commission, OECD, published annually, data to be processed in order to be able to provide a general and analytical picture of the most important changes taking place in the European Union as a whole, but also globally - considered representative for the understanding of the phenomena studied, and especially in Romania.

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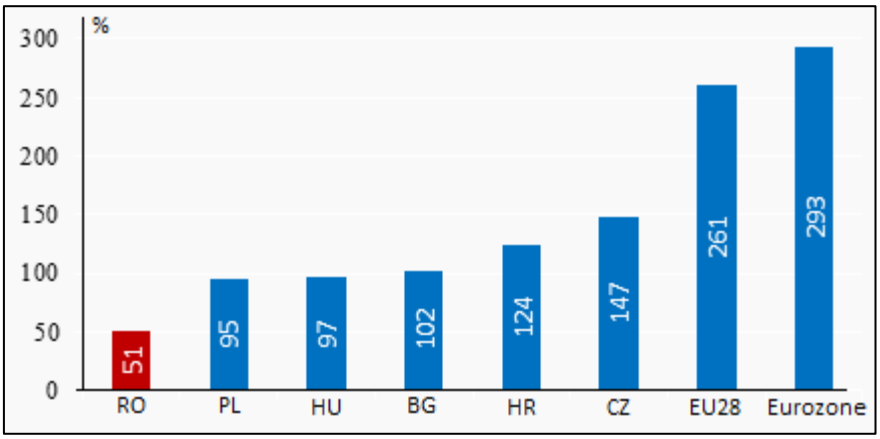
Implementing the Results

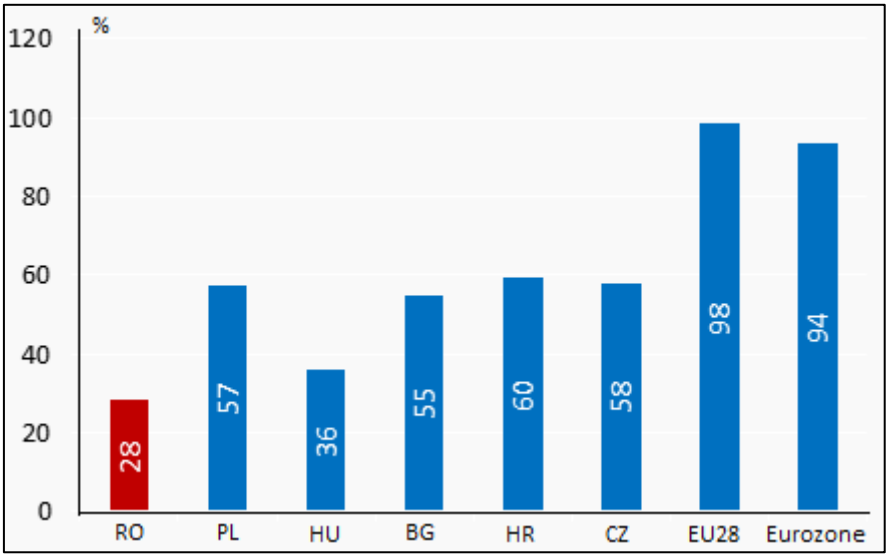
In this research paper we present financial stability and macroeconomic balances: challenges and perspectives.

Figure 1 - Banking sector assets as a share of GDP (Q1 2017)



Source: ECB

Figure 2 - Non-government loans as a share of GDP (Q2 2017)



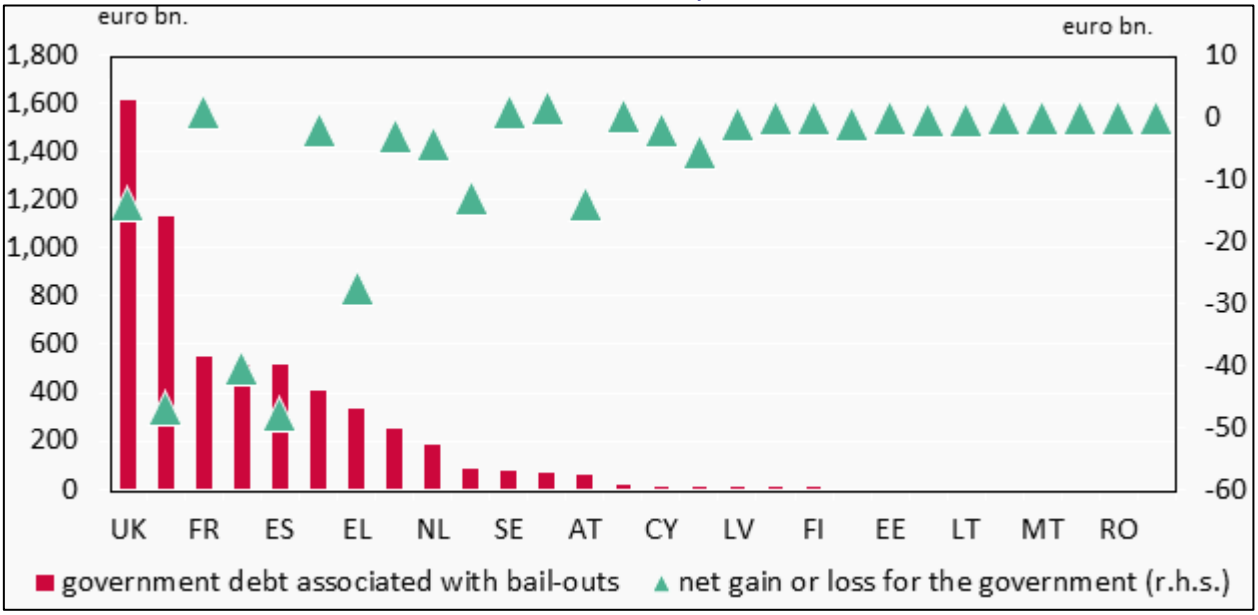
Source: ECB, Eurostat

Historically, the level of financial intermediation in Romania has remained low:

- high and persistent inflation for a long period of time;
- lending standards perceived as disadvantageous: large-scale use of other financing sources; this pattern diminishes firms' long-term capacity to benefit from development opportunities;
- an important part of the credit demand is not bankable (large number of undercapitalized companies, significant inequality in households' income);
- direct recourse to foreign funding, especially in case of large companies

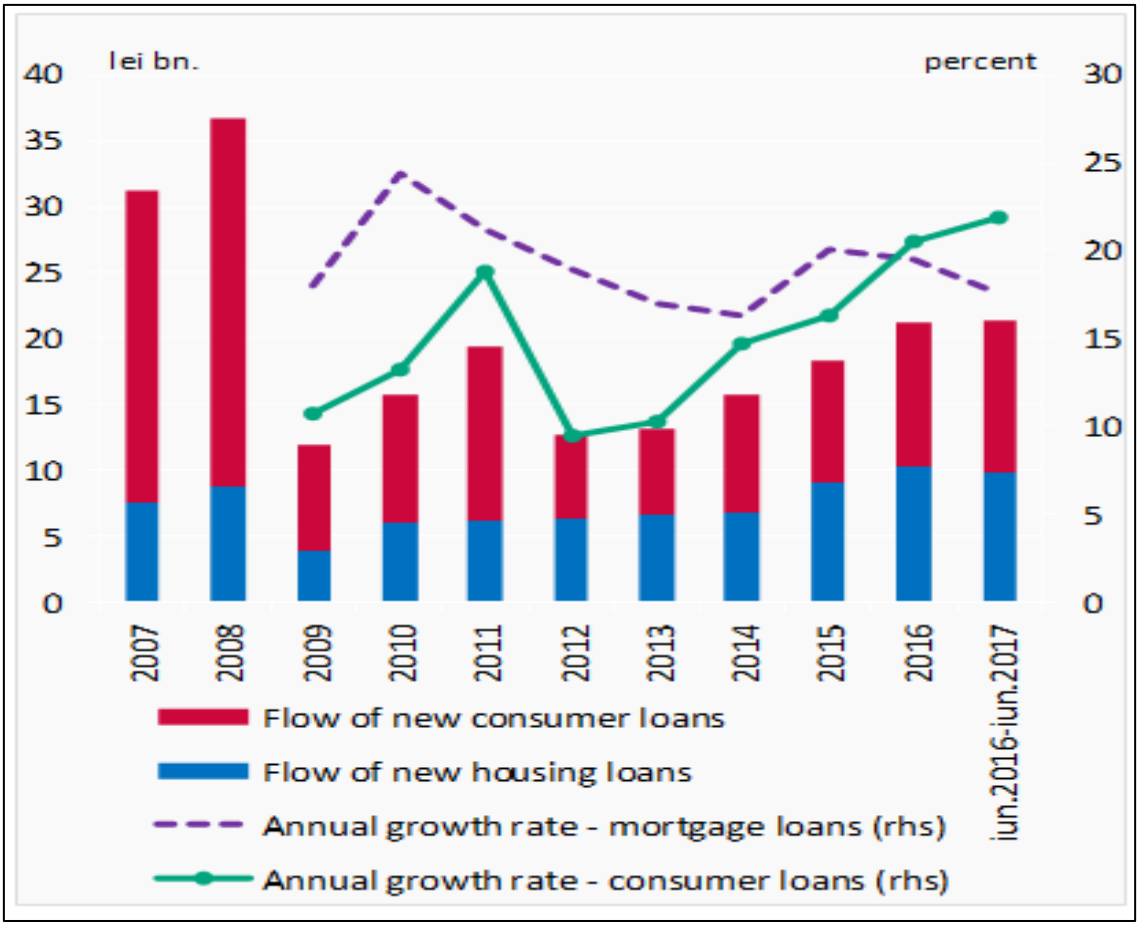
The banking sector in Romania did not need funds from the budget during the crisis.

Figure 3 - Government intervention in supporting financial institutions in EU member states, 2007-2015



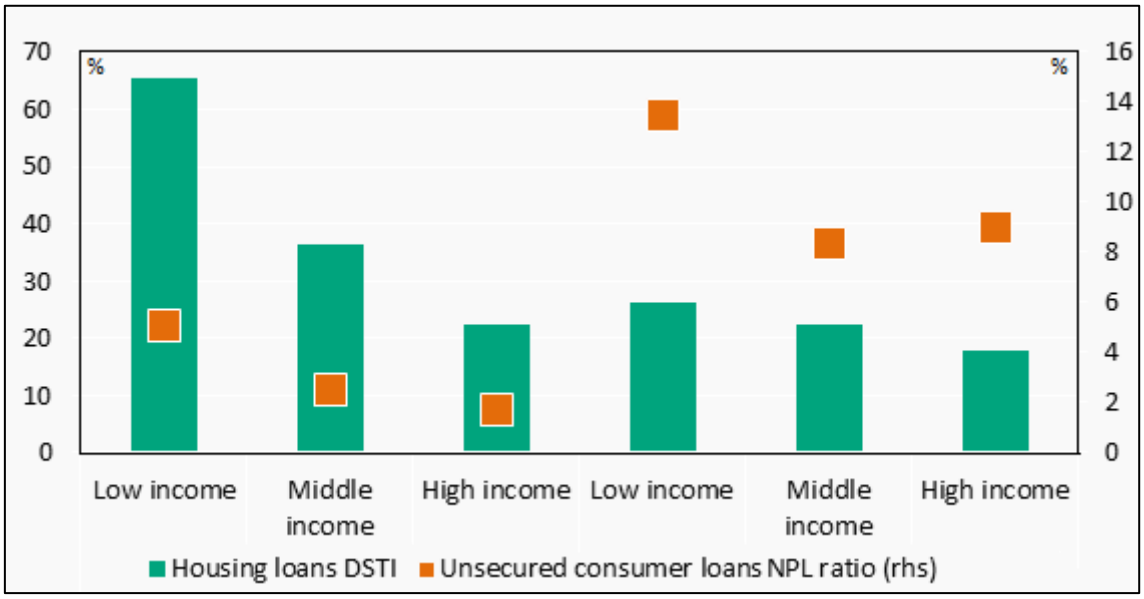
Source: Voinea, 2017, "Romania in the euro zone: when and how"

Figure 4 - Household sector: high indebtedness, increasing vulnerabilities. Volume of new loans.



Source: NBR, Credit Bureau, National Agency for Fiscal Administration, NBR calculations

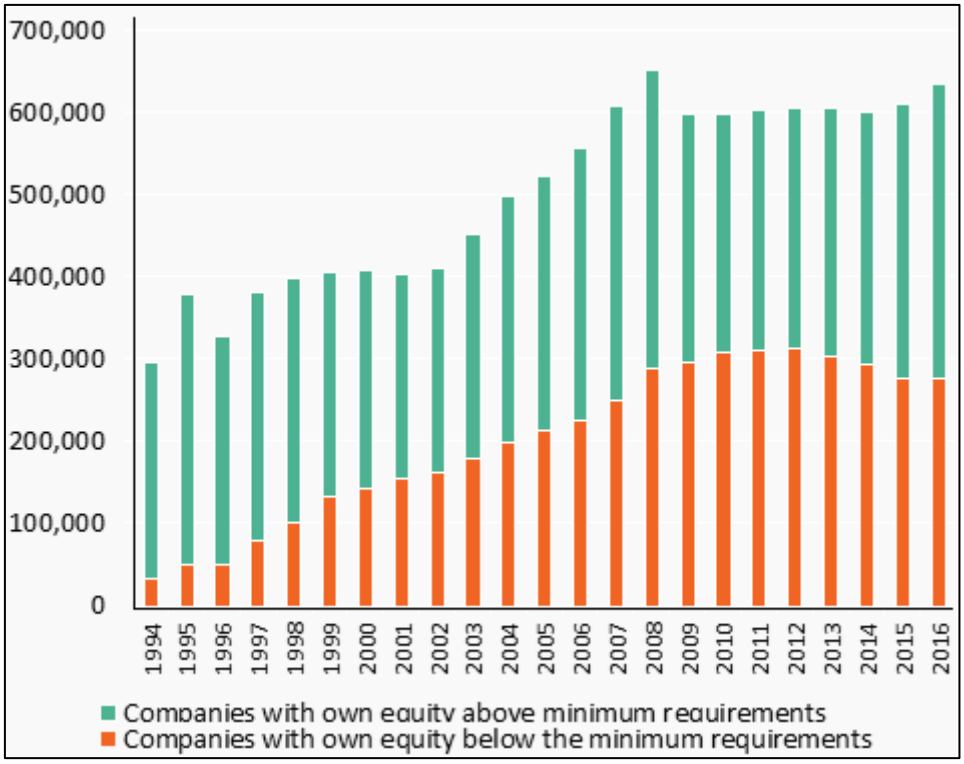
Figure 5 - Debtors' level of indebtedness (June 2017)



Source: NBR, Credit Bureau, National Agency for Fiscal Administration, NBR calculations

The need for strong budgetary is constraints to clean up the economy.

Figure 6 - The number of active non-financial corporations in the economy by level of capitalization



Source: update of Neagu, Dragu and Costeiu - "Pregătiți pentru viitor? O nouă perspectivă asupra economiei României" (2016)

Table 1

Atypical companies

	No. firms - thou. -	Debt - lei bn. -
Companies with own equity below minimum requirements	276.5 (44%)	355.7 (43%)
Companies with negative own equity	268.5 (42%)	324.5 (39%)
Companies with zero sales	164.4 (26%)	105.6 (13%)
Companies with zero employees	263.7 (42%)	159.9 (19%)
Companies with negative equity, no sales and zero employees	100.1 (16%)	65.4 (8%)

Note: The values in the parentheses represent the share in the non-financial companies' sector
Source: MPF, NBR

The need for Strong Budgetary Constraints to Clean up the Economy.

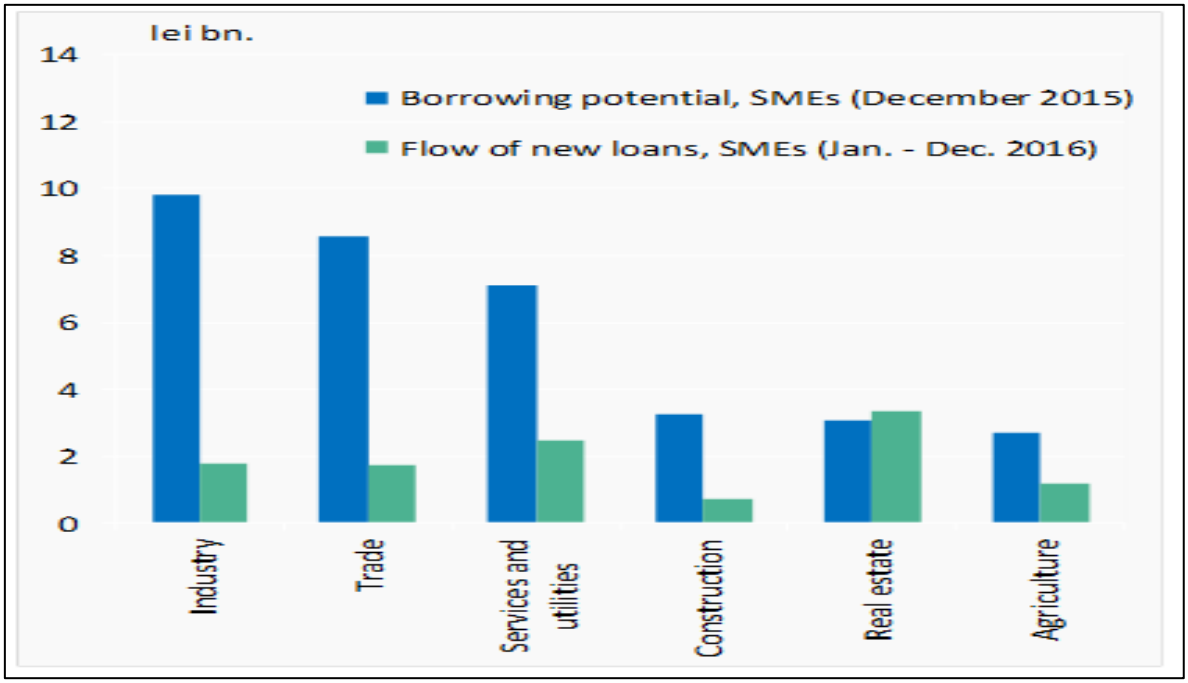
The necessary amount of capital for firms with own equity below minimum requirements:

- to reach the regulatory threshold (50% of the share capital): lei 156.8 billion;
- to reach 100% of the share capital: lei 187.7 billion.

Despite positive macroeconomic developments in recent years, the recapitalization need continued to grow (+3.7% in 2016 compared to the previous year)

SMEs' borrowing potential is significant.

Figure 7 - Borrowing potential and flow of new loans by SMEs' business sector



Source: MPF, NBR, NBR calculations

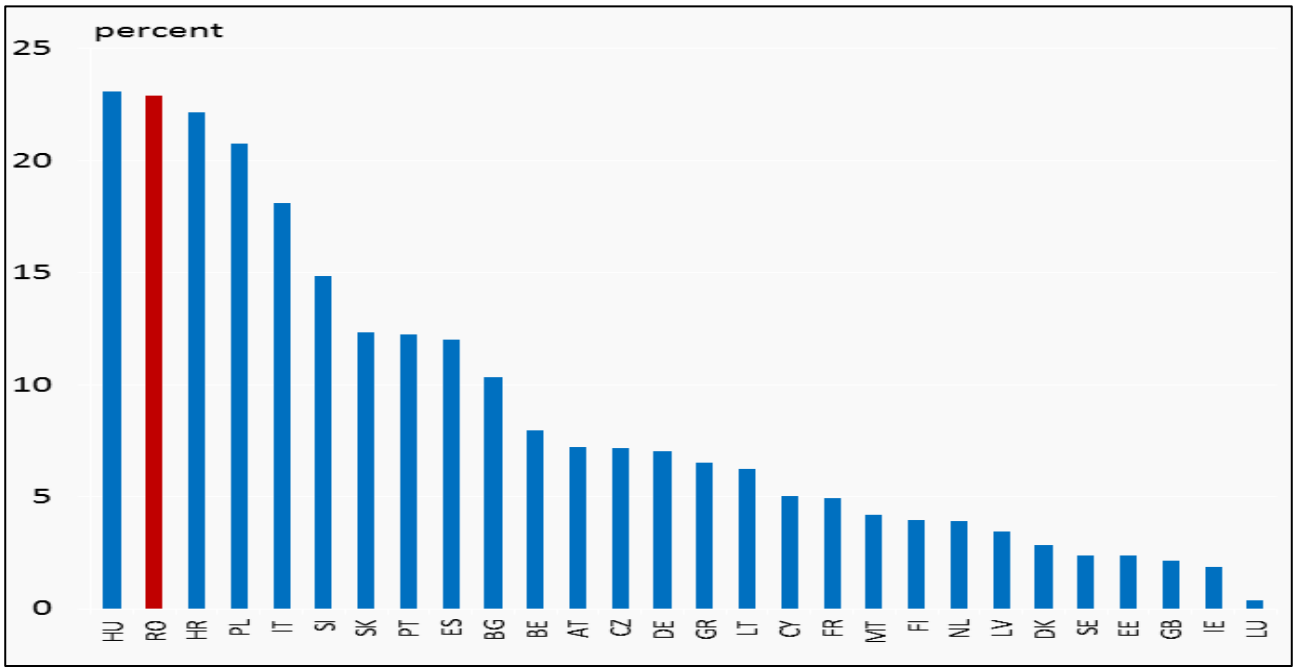
- around 12,200 SMEs can be considered well-performing companies in the economy, as they have remained among the top firms in at least 7 of the last 9 years
- among these, over 6,600 SMEs have a leverage ratio below 1 and can sustain an important volume of borrowings: lei 36.3 billion

The Necessity for Supply to Adjust to the Needs of Demand.

To increase the interest of bankable firms in the products offered by credit institutions, it is necessary:

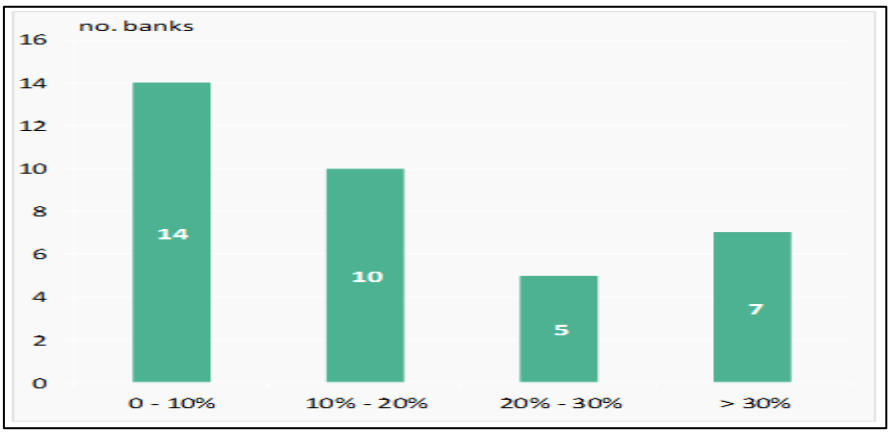
- to develop flexible products, which accommodate companies' specific requirements (*tailor-made products*);
- to set up special divisions, focusing on lending activities to more riskier segments, such as start-ups;
- to simplify the lending process;
- to improve the skills of bank staff involved in loan analysis and risk management.

Figure 8 - Banks' sovereign exposures as a percentage of total assets, EU comparisons (August 2017)



Source: ECB

Figure 9 - The distribution of local banks based on the share of sovereign exposures in their assets (June 2017)



Source: NBR

Banks' exposures to the public sector: pros & cons

Advantages

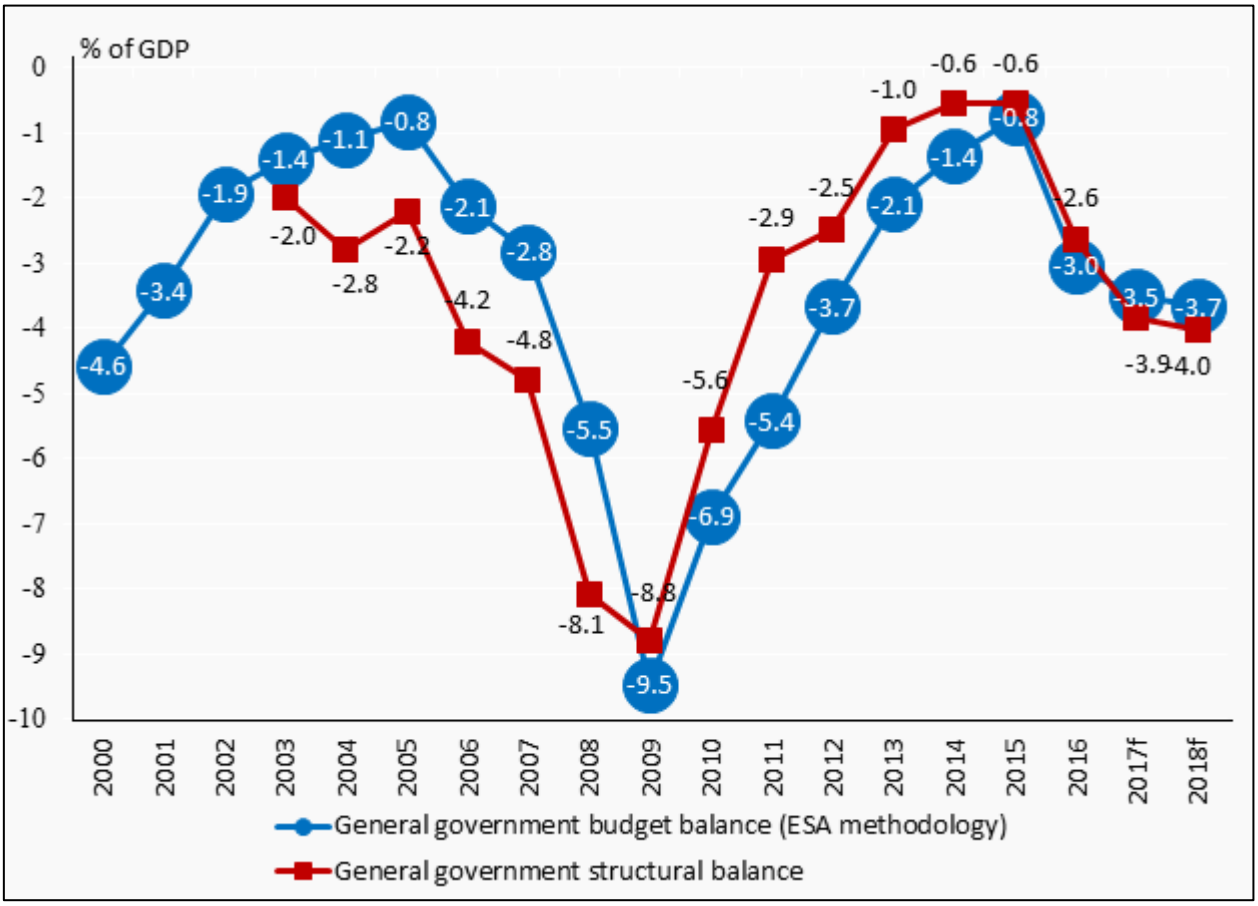
- stabilizing role in periods of financial turmoil
- investments with low risk
- help improve banks' liquidity position

- eligible collateral to access the central bank's lender-of-last-resort facilities

Disadvantages

- increased interdependencies between banks and sovereigns
- limitations on private sector lending activities (crowding-out)
- concentration risk
- the risk of new EU regulations strengthening the capital requirements for sovereign debt holdings

Figure no.10. Essential challenges to macroeconomic balances/The need for counter-cyclical policies



Note: The structural balance is the general government balance adjusted for the cyclical component (estimated based on potential output). Data for 2017 and 2018 are forecasts of the European Commission.

Source: European Commission (AMECO), Fiscal Council

Conclusions

Essential challenges to macroeconomic balances

The need for counter-cyclical policies

Highly pro-cyclical policies in 2006-2008 resulted in:

- a well above-potential acceleration in economic growth
- significant deterioration of the current account deficit to exceptional levels (13.8% of GDP in 2007 and 11.8% of GDP in 2008)
- permanent budgetary expenses based on extraordinary revenues (e.g., excessive and undifferentiated pensions growth)
- rapid public debt growth (from 12.7% of GDP in 2007 to 23.2% of GDP in 2009)
- exhausting all resources for counter-cyclical policies in the recession period that followed

Essential challenges to macroeconomic balances

The need for counter-cyclical policies

Where we stand now:

- economic growth is above potential (+5.9% in H1 2017 compared to H1 2016)
- current account deficit remains within manageable limits (2.5% of GDP in Q2 2017), but Romania is one of the few EU countries with significant and increasing deficits
- the authorities committed to maintaining the public deficit below 3% of GDP
- alarmingly approaching the sustainable public debt threshold in terms of our economy's conditions: 37.6% of GDP in 2016, compared to a maximum estimated value of 40-45% of GDP at current costs
- the massive increase in the public wage bill is an overwhelming burden for the coming years, even without granting the remaining promised salary increases
- drastically limiting the public capital expenditure results, among others, in a reduced capacity to access European funds
- European Commission's forecasts indicate a continuous increase in the public deficit in the next years (to 3.7% of GDP in 2018)

Rapid decrease in the fiscal space/ A potential recession at European level could produce much more severe effects in Romania.

Essential challenges to macroeconomic balances:

The demographic issue:

- the natural decline of population is one of the highest in Europe;
- migration to other countries has reached endemic levels, considering that over 15% of total population, or 25% of the workforce, has left Romania, and this process is ongoing;
- for some top professions, such as the ones in healthcare, the situation tends to become critical;
- the lack of qualified personnel is the main deterrent to economic development;
- nevertheless, the underemployment remains a widespread phenomenon, especially in underdeveloped areas (there are counties where the number of socially-assisted individuals is significantly higher than that of the persons employed).

Bibliography

Florian Neagu, Florin Dragu, Adrian Costeiu, (2017), Prepare for the future? A New Perspective on Romania's Economy, Study book no.46, march 2017, National Bank of Romania, Bucharest

Voinea, 2017, "Romania in the euro zone: when and how", http://www.bnr.ro/DocumentInformation.aspx?idInfoClass=6885&idDocument=25832&directLink=1

* * *, National Bank of Romania, Interactive database, http://www.bnro.ro/Interactive-database-1107.aspx

* * *, National Agency for Fiscal Administration, https://www.anaf.ro/anaf/internet/ANAF/acasa/!ut/p/a0/04_Sj9CPykssy0xPLMnMz0vMAfGjzOI9DD3MPIwsjLwsHF2dDBydLfxCLZyBAu7G-sGpefoF2Y6KACMC1qA!/

European Commission AMECO database, https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco/ameco-database_en

FISCALITY, PUBLIC BUDGET, AND REAL ECONOMY

THE ROLE OF INFORMATION IN GROWTH OF INSTITUTIONAL RESILIENCE

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Simona–Ionela BECHERESCU[24], PhD(c)

Abstract

In the age of knowledge that mankind is currently going through, information is the basic element that has led to a paradigm shift in all social spheres. As a neo-factor of production, it is the basis of innovation, an essential element of increasing economic competitiveness.

Continued adaptation leads to increasing the capacity of an institution, with public or private capital, to respond quickly to challenges, mitigate risks and ultimately face change. Thus, the risk management mode that the institution can assume or, more precisely, determine its acceptable level, makes the difference between resilience and collapse.

This approach aims to address information issues, how it impacts institutional resilience, and at the same time attempts to identify various ways to increase their anti-fragility.

Keywords: information, knowledge, risk, institutional resilience, management

JEL classification: D83, D81, G32

Introduction

Mankind is now in the age of knowledge, a time when information is the basic element that has led to a paradigm shift in all social domains. A concept emerged in the late 1990s and used by a part of the academic society as a variant of the notion of "information society," the "knowledge society" was adopted by UNESCO as an instrument in its institutional policies, because it includes, in addition to the idea of technological innovation, a dimension of social, cultural, economic, political and institutional transformation and a more pluralistic, more developed perspective.

The concept of "knowledge economy", popularized by Peter Drucker in his book "The Age of Discontinuity" (1969), refers to the knowledge-based economy, that is, the economy that uses a large proportion of knowledge-based and innovative technologies to achieve economic results.

Peter Drucker highlighted in his work "The Effective Executive" (1966) the basic concepts of the knowledge economy. The author describes the differences between the manual worker who works with hands to produce goods and services and the so-called "knowledge worker", who works mostly with the mind, and who produces ideas, information and, ultimately, knowledge.

He considers knowledge to be a real tool, a basic one, with an essential role, and not a subtle one, and consequently ignored in economic analyzes.

Information and Knowledge and Transition to an Information - Based Knowledge Economy

The concept of knowledge economy is based on the notions of information, knowledge and, implicitly, knowledge. We can define the information by going through the entire logical and psychological chain of signal - sign - data - information as that data that reduces uncertainty.
Knowledge is that information which, once received as such, finds in the pre-existing cognitive "deposit" of the receiver a compatible information base (and knowledge) that allows it to be structurally integrated.[25]

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[25] *Dinga, Emil, Cunoaștere, acțiune și ordine economică, http://emildinga.ro/category/carti/carti-aflate-in-lucru/*

Knowledge is made up of all the cognitive domains that are based on cognitive deposits formed in a subject. This is not only the logical sum of the cognitive deposits taken individually, but it also contributes to the synergistic effect produced by the connections between them, manifested by the mutual causal action.

Specialists describe the current global economy as a transition to an information-based knowledge economy, full transformation requiring a paradigm transformation that leads to the same importance of knowledge resources (expertise, know-how, etc.) with the other economic resources.

In our days, huge amounts of information are processed every second. According to a recent report by Cisco Systems, the world market leader and the leading provider of IT and communications networks, global IP traffic will reach 3.3 ZB (zettabytes) by 2021 per year by 2019 by 2021. This is a challenge for technological advancement, which will have to cope with the need to process such a huge amount of data that comes from the traffic of business systems, social networks, portable technologies, or mobile applications.

Table 1

Global IP traffic in 2016-2021

IP Traffic, 2016-2021	2016	2017	2018	2019	2020	2021	CAGR 2016-2021
By Type (Petabytes per month)							
Fixed Internet	65942	83371	102960	127008	155121	187386	23%
Managed IP	22911	27140	31304	35226	38908	42452	13%
Mobile daa	7201	11183	16646	24220	34382	48270	46%
By Segment(Petabytes per month)							
Consumer	78250	99777	124689	154935	190474	232655	24%
Business	17804	21917	26220	31518	37937	45452	21%
By Geography (Petabytes per month)							
Asia Pacific	33505	43169	54402	68764	86068	107655	26%
North America	33648	42267	51722	62330	73741	85047	20%
Western Europe	14014	17396	21167	25710	30971	37393	22%
Central and Eastern Europe	6210	7451	8940	11016	13781	17059	22%
Middle East and Africa	2679	3910	5538	7773	10941	15490	42%
Latina America	5999	7502	9141	10861	12909	15464	21%
Total (Petabytes per month)							
Total IP trafic	96054	121694	150910	186453	228411	278108	24%

Source: Cisco VNI, 2017

In his speech at the Davos Forum in January 2016, Klaus Schwab, Executive Chairman and Founder of the World Economic Forum, said that "the changes are so profound that, from the perspective of human history, there has never been a time of greater promise or potential peril. My concern, however, is that decision makers are too often caught in traditional, linear (and non-disruptive) thinking or too absorbed by immediate concerns to think strategically about the forces of disruption and innovation shaping our future". Also on this occasion, he reveals that „ believes that we are on the verge of a revolution that will fundamentally transform the way we live, work and interact with each other. Participation in this fourth industrial revolution has to be integrated, comprehensive, multilateral, involving the public sector, private sector, academia, civil society".[26]

Information and Risk in Decision-Making Process

A real challenge is not only to process the huge volume of data, but also to record, store, analyze and distribute them. This process of information circulation is not free of risks, and data can be trafficked into more or less obscure interests, representing one of the dangers of the fourth industrial revolution.

At the same time with the development of human society, management emerged and developed a science that self-imposed as a process of guiding human activities in order to achieve the desired goals.

[26] *Schwab, K. (2016). The fourth industrial revolution: what it means, how to respond, World Economic Forum, Davos, January, 14*

For a long time, managers have considered decision-making as an art, which they have mastered by learning from trial and error. A decisive role played creativity, reflection, intuition and experience, and less quantitative methods based on a scientific approach.

The huge amount of information, a defining feature of the knowledge society, makes today's management evolving continuously, being in constant change. The ubiquitous, non-intrusive and proactive electronic environment helps managers in a personalized and context-sensitive way in their everyday tasks. The economic, social and political environment in which management decisions are currently taken is characterized by a pronounced and continuous dynamics, so that the risk of achieving an unwanted or different result than that anticipated and taken into account when choosing the variation as a result of the application the decision is quite high.

Institutional resilience is the ability of an institution to prepare itself to resist and recover after major disasters or other circumstances that exceptionally obstruct, in part or in full, the conduct of current activities.

Crises can lead to disruption of the institution's activity, damage to reputation and / or the creation of a negative social impact.

The state of crisis arises when it is convinced that a misfortune can only affect others. This conviction automatically leads to ignorance, negligence, and, most of the time, lack of inspiration. All this is reflected in the increased vulnerability of systems and an exposure to possible shocks caused by the occurrence of unwanted events.

The crisis refers to undesirable events triggered by human and / or natural factors that cause strong emotional trauma and material damage at individual, institutional and social levels.

Experts from various fields analyze situations and continually try to find answers to questions such as:

- when and where a crisis occurs;
- which is the magnitude of the events that can be considered by the systems to be able to maintain their operating state;
- are we ready to deal with?

The crisis itself leads to the deterioration of human, economic, political, social and human relationship systems and may lead to disruption of activity, damage to reputation and / or the creation of a negative social impact.

If anticipation of any type of crisis or any catastrophic event is very difficult, information on identifying the potential for the occurrence and spread of undesirable events is vital. Information and communication play a pivotal role in formulating the plan for continuing work and returning to normality.

Technology helps identify and understand potential risks, so its input is the first step in the process of developing a crisis and response strategy.

At this level of responsibility comes the resilience that has the mission of setting up the specific response strategies for each type of unwanted event by involving as many decision-makers as possible.

Building the resilience of an organization / institution implies:

- developing a specific regulatory framework;
- material and human resources allocation as well as the necessary funds;
- designing a portfolio of procedures and working rules;
- developing the perception of the importance of building resilience and adopting measures that increase social synergy between all the actors involved;
- promoting and implementing at all levels the culture of anticipation, prevention and risk preparedness;
- elaboration of post-crisis plans and return to normality, etc.

Relationship between Information and Institutional Resilience

Information helps the institution adapt to changes of any nature (climate, economic, political, social and even technological) in a timely manner and at a lower cost.

An organization or institution can achieve its objectives only when it identifies the risks of any nature as accurately as possible and assumes them and controls them.

Information requires searching and finding new innovative solutions through:

- cultivation of the desire for professional development, knowledge of the new technique;
- discovering new products (medicine, ecology, biology, physics, chemistry, etc.);
- developing rules and methodologies for improving the working process;
- adapting internal and external communication to solve the created situation;
- taking the right decisions under uncertainty;
- insurance of goods and calculation loss coverage.

The manager must do his best to obtain the information he needs to ensure the quality of the decision. At the same time, he must adopt participatory management, involving people in charge of making the decision at optimum time.

The evolution of technology and new research in various scientific fields, even under stress, are tools that a manager needs to use in his work.

Anti-fragile refers to stress resistance, shock, whereby a system gets better, using resistance and innovation as the main engines of growth and development over time, in unknown, uncertain conditions. This is why most of the time, building an anti-fragile system is a lengthy process that requires major efforts from the entire staff of the institution and in particular, from the managerial staff.

A robust management strategy should include both risk management programs and procedures that aim at minimizing the likelihood of these risks and potential exposure.

The ability to cope with problems and failures depends on the psychological capacity of anyone. The use of skills, knowledge, strengths helps the recovery process after any shock that has occurred as a result of a special, unexpected event for both an individual and his or her collective or family.

These special events may have a major impact on an entire community, such as natural and industrial disasters, international financial crises, or for an individual through job loss, financial problems, illness, the death of a close relative, etc.

Experts in sociology, psychology, philosophy, medicine etc. studies how people are able to learn and develop specific skills to develop their ability to become resilient.

Information along with communication helps human resilience to focus on analyzes of major risks and threats to human systems.

The competitiveness of an institution is largely influenced by the ability to understand and adapt as accurately as possible to the surrounding world.

The objectives of current research involve identifying the social, economic and policy factors that contribute most to facilitating institutional resilience.

The general aspects tracked in the study are:

- the importance of research for its own innovative development;
- valorizing human resources in terms of motivation for performance;
- perceived self-efficacy in learning;
- social relation in professional contexts;
- the subjective well-perceived state of personnel in the institutional space;
- mediating factors that facilitate institutional resilience: leadership, community, socio-economic environment, policies.
- identifying the context factors that contribute to the manifestation of institutional resilience in the target group of research;

- developing a set of recommendations (at institution level and at policy level) ;
- designing a methodology for a longitudinal study with resilient and non-resilient subjects.

Thus, information and knowledge can be used as a competitive advantage to reach the goal at the proposed time.

Competitiveness suggests safety, efficiency, quality, high productivity, adaptability, success, modern management, superior products and optimal costs.

At the institution level, the ultimate goal is to obtain welfare benefits. It can be achieved by using:

- research and innovation programs;
- modern technology;
- products and services newly launched on the market, in other words by making the most competitive technological advantage.

Technological competition requires business resilience and the company's ability to quickly reconfigure and adapt business to changes of any kind (national and international political and economic, climate change, etc.).

The institution or company becomes an anti-fragile when:

- face the crisis and failure;
- keep up with technological developments;
- is able to quickly reconfigure and reposition;
- finds availability for new, innovative solutions to bring benefits and turn it into a performing entity.

The role of macroeconomic policies is to support competitiveness through flexible policy measures so as to enable institutions to cope with international competition in their business segments by reallocating resources to research and developement.

In fact, the creative factor must be supported by empowered institutions and policy makers by supporting research and innovation, promoting sound policies to reduce the budget deficit, better spending orientation (improving infrastructure, investing in human capital) and fiscal sustainability.

The fragility of an institution is due to limited access to capital and the use of outdated technologies and equipment.

Resilience requires productivity growth in most economic sectors, risk-taking and investment in research, development and innovation.

Addressing issues such as lower purchasing power, declining unemployment, poor infrastructure, and inefficient managerial activity would help increase the level of competitiveness. Progress is given by vision, competence, responsibility, credibility, enthusiasm and creativity. These are the primary characteristics of the institution, absolutely necessary to achieve the established objectives. Driving skills and leadership need education, new experiences, interaction with people and an effective practice.

The main aspects of assessing the performance level of an institution and defining its overall efficiency and economic performance as a whole are: economic efficiency, planned and achieved performance, product competitiveness, or company excellence.

The competitive strategy of the institution needs to adapt rapidly to any change, so it requires close monitoring of society, collaboration with international institutions, maintaining offensive strategy and defense of results, adapting the strategy to the demands of the current age characterized by extreme dynamism.

Conclusions

The direction of an institution or company is given by its own strategy, while the chances of success are given by the competitive advantages.

In order to increase the company's competitiveness, in order to compete and increase profits, it is necessary for the manager to be well informed with world news in the field, to know the trends in the international market and the prospects for its evolution, including to have information on the programs global competitors.

With the progress, the management model can change and the current manager can no longer confine himself to the strict activity of his institution nor to the old knowledge of the activity in the branch of his country of activity.

For current managers, the number of possible action paths can be very high, and the degree of uncertainty can make it very difficult to predict the consequences of making a decision. Thus, the effects of errors in decision-making may be disastrous due to the complexity of the operations and the chain reactions that these errors can produce.

Analyzing the activity of the institutions, it can be observed that, in order to obtain the competitive advantage, but also to maintain it, they use at least three ways specific to the global strategy:

- costs minimizing;
- product / service policy;
- defining the purpose pursued by the institution.

In addition, the report on institutional capacity building measures, including legislative measures aimed at clarifying responsibilities and ensuring coordination of various governmental institutions for the implementation of the priority sector's investment program, is added.

In conclusion, adapting to change, innovation, affordable prices, faster and quality services are the key to success in any activity.

Bibliography

Dinga, Emil. Cunoaştere, acţiune şi ordine economică. [on-line], [accesat la data de 10 septembrie 2016]. Disponibil online la adresa: http://emildinga.ro/category/carti/carti-aflate-in-lucru/

Dinga, E., Ionescu, C., Pădurean, E., Leonida, I., Bălțărețu, C. Sustenabilitatea economica prin politici de ajustare in contextul globalizării. Bucureşti: Editura Academiei Române, 2011

Drucker, Peter F. The effective executive: the definitive guide to getting the right things done. New York, NY: Harper Business, an imprint of Harper Collins Publishers, [2017]

Drucker, Peter F. The age of discontinuity: guidelines to our changing society. New Brunswick (U.S.A.) : Transaction Pubs., 2008

Schwab, K. (2016). The fourth industrial revolution: what it means, how to respond, World Economic Forum, Davos, January, 14

* * *, Cisco Visual Networking Index: Forecast and Methodology, 2016–2021, https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-481360.html

LOCAL SUSTAINABILITY FROM THE PUBLIC FINANCES' PERSPECTIVE. MEASURING THE EFFECTS AT REGIONAL LEVEL

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Abstract

The present approach proposes an empirical analysis of the local budgets' dynamics in regional profile from the perspective of the financial sustainability at local level, and through subsidies from the state budget and in view of financing the development projects, able to supply public services and goods and the identification of the dependence correlations or relative autonomy, in ratio to the central administration.

Keywords: sustainability, rural development, local budgets.

JEL classification: H71, H72, R12

Introduction

The approach to the issue of a local economy's sustainability from the perspective of budget resources' allocation at local level has lead, along time, to many debates, both from the perspective of amounts allocated and, especially of their utlization. It is obvious the fact that through the efficient allocation of the financial resources, be they from the local budgets, or coming from the state budget, local communities are benefitting from a significant input from the point of view of the incidence upon the development and competitiveness level of the activities enterprised.

From this perspective, the present approach proposes itself to make a comparative analysis, with direct impact upon the local sustainability, of local resources and budget expenses at local level.

Methodology and Information Support

From the information support perspective the present approach is based on the public information available through the *Tempo-Online data base*. In ratio to the utilized methodology there is imposed a series of clarifications which start, first, from the modality of defining the notion of „local", „regional", in conformity with the community approaches.

On the way of whole approach, the analysis of local sustainability from public finances' perspective was realized at the level of three types of regions, as they were defined by OECD, respectively:

- Regions predominantly urban, in which 20% of the inhabitants live in these areals;
- Intermediary regions, grouping between 20%-50% of the population;
- Regions predominantly rural, in which 50% of the inhabitants live.

In the above context, we have to mention the fact that the structure of the three types of regions are regrouping the following counties:

a) Regions predominantly urban – Bucharest and Ilfov;

b) Intermediary regions– Argeş, Bacău, Bihor, Braşov, Brăila, Cluj, Constanţa, Dolj, Galaţi, Hunedoara, Iaşi, Neamţ, Prahova, Sibiu, Timiş;

c) Regions predominantly rural – Alba, Arad, Bistriţ-Năsăud, Botoşani, Buzău, Călăraşi, Caraş-Severin, Covasna, Dâmboviţa, Giurgiu, Gorj, Harghita, Ialomiţa, Maramureş, Mehedinţi, Mureş, Olt, Satu-Mare, Sălaj, Suceava, Teleorman, Tulcea, Vâlcea, Vaslui Vrancea.

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At the same time, it is imposed the statement that the time interval afferent to the present approach is covering the period: 1990-2015, the data being transformed into prices comparable to the year 2015 through the utilization of the consumption prices' index (1990=1).

Results Obtained

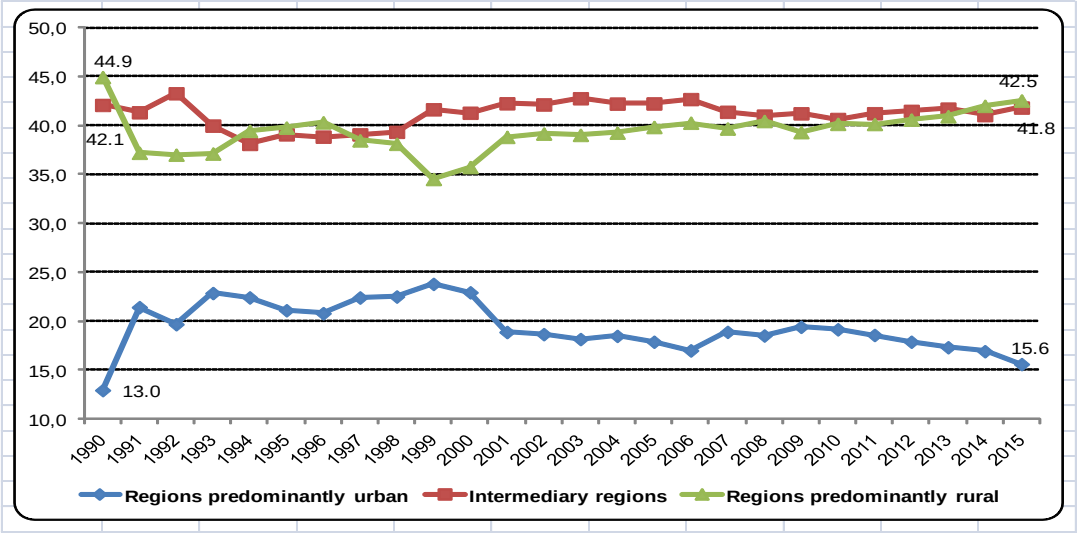
Starting from the above methodological considerations, the period : 1990-2015 is characterized by constant prices 2015, through an increase of the incomes afferent to local budgets, with an average annual rate, per total of 4.6%, with an oscillation range of this indicator varying between 4.4% (regions predominantly rural) and 5.4% (regions predominantly urban). Practically, the value of the local budgets' incomes per ensemble of national economy increased in 26 years from 20 billion.lei (1990) to 61.5 billion lei (2015).

On the same increasing trend there are also situated the local budgets afferent to the three types of regions, the most significant increase being that of the regions predominantly urban where the level of incomes of local budgets has registered, in comparable prices, almost a tripling towards the year 1990.

The change of the ownership structure and the specific weight allocated to each region has lead to the doubling of the incomes of local budgets and in the regions predominantly rural. Acknowledgeing the importance of agriculture and rural space in the national economy ensemble, and also by correlation with the doctrines and community currents, the incomes of local budgets from the predominantly rural regions increased from 9 billion lei (1990) to 26.2 billion lei (2015).

As share in total incomes of local budgets, those afferent to the predominantly rural regions, although they diminished the percentage owned from 44.9% (1990) to 42.5% (2015), they are continuing to be on first position in comparison to those afferent to regions- predominantly urban and those intermediary (Figure 1).

Figure 1 – Share of budget incomes by types of regions in total economy, in the period 1990-2015



Source: Own calculations on basis of Tempo-Online data base, 1990-2017.

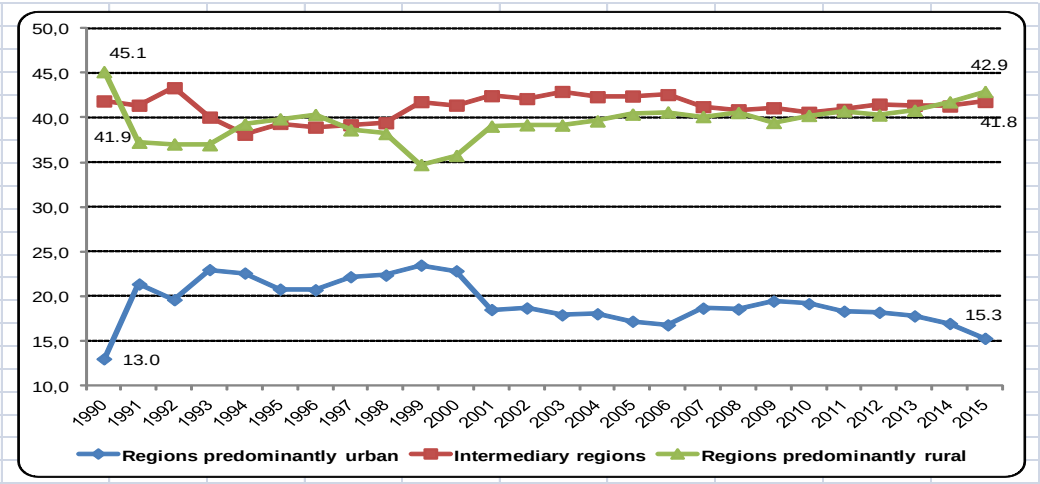
Respecting the incomes' trend, the expenses of local budgets registered in the period 1990-2015 a visible tendence of increasing, resulted, on one hand, from the real need of adjusting to the globalization tendences, and on the other hand, from the allocation and utilization, in some cases, in an un-proper way of the funds allocated, in comparison to the local communities' needs.

Along 26 years, the expenses of local budgets, per total economy increased from 20 billion lei (1990) to 59 billion lei (2015), tendency, anyhow, visible also at the level of the three types of regions analysed.

Comparatively to the regions predominantly urban, where the level of budget expenses increased from 2.6 billion lei (1990) to 9 billion lei (2015), in the regions predominantly rural the level of these expenses exceeded of over three times the one allocated to the urban environment. Although, per ensemble of period 1990-2015, the expenses of local budgets afferent to regions-predominantly

rural incresed by a percentage inferior to those in the urban environment, as share in total, these are continuing to own, at level of the year 2015, around 43 percentages, in slight diminution by 2 percentage points opposed to the year 1990 (Figure 2).

Figure 2 – Share of budget expenses by types of regions in total economy, in the period 1990-2015



Source: Own calculations on basis of Tempo-Online data base, 1990-2017.

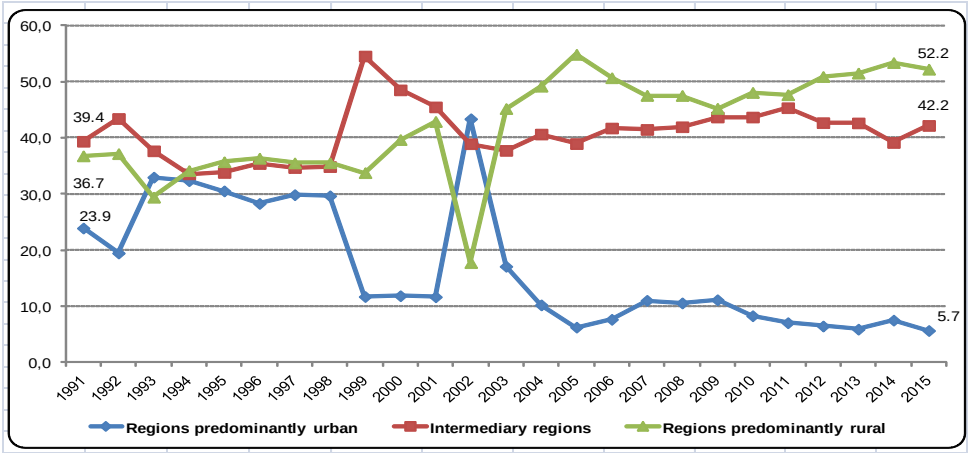
Without minimizing the efforts made by the local communities, we must precise that during the process of regional economic development, a direct influence factor was represented by the subsidies granted from the state budget.

From this perspective, the period 1991-2015, for which there are available the public statistic data, is characterized by a tendency of increasing the subsidies' level by percentages varying between 38.1% (intermediary regions) and 83% (regions-predominantly rural). Exception from the rule was represented by the predominantly urban regions, where due to the local specificities and the capacity to attract financing sources dedicated to the development of the respective communities, the level of the subsidies received from the state budget was diminished by 69.5% in year 2015 comparatively to 1990.

This divergent trend in the process of sustainable development between the three types of regions, explainable, among others, through a reduced local institutional capacity has lead, per ensemble of national economy to an increase of the subsidies allocated from the state budget by 28.9% (from 6.1 billion lei in 1990 to 7.9 billion lei in year 2015).

As share in total economy, the level of subsidies from the state budget allocated to the predominantly urban regions has registered a diminution by 18.2 percentages, while the regions-predominantly rural increased their contribution from 36.7% (1991) to 52.2% (2015) (**Figure 3**).

Figure 3 – Share of subsidies from the state budget by types of regions in total economy in period 1991-2015 (%)

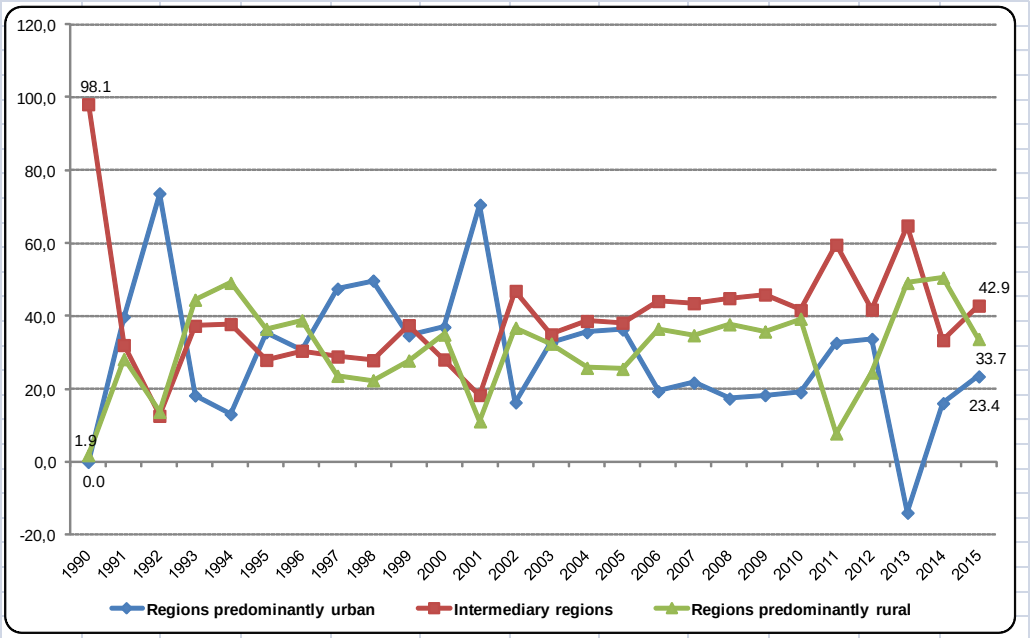


Source: Own calculations on basis of Tempo-Online data base, 1990-2017.

As indicator expresssing the capacity, positive (excedent) or negative (deficit) of a community to ensure its resources, necessary for the local development, the budget excedent has registered in period 1990-2015 a tendency to increase both per ensemble of national economy, and at the level of the regions analysed, as inflexion point in the year 2012.

As percentage in total economy, the budget excedent from the predominantly rural regions increased from 1.9% (1990) to 33.7% (2015), visible trend, though, at the level of predominantly urban regions, too (Figure 4).

Figure 4 – Evolution of share in budget excedent/deficit at local level by types of regions in total economy in period 1990-2015 (billion lei , prices 2015)



Source: Own calculations on basis of data from Tempo-Online data base , 1990-2017.

Conclusions

The thorough approach of the issue of sustainability in the public finance at local level, even through ratio to the indicator analysed within the present approach, permits the contouring of at least three conclusion, respectively:

The preponderently rural character of local communities is generating financial flows, net superior to those in the preponderently urban regions, both from the point of view of budget incomes, and of the expenses and subsidies recieved. In close connection with the argumentation above, it is to be reminded also the orientation of the level of subsidies from the state budget to the predominantly ruural regions, in view of ensuring the financial neccessary for the development on local plan.

In the process of sustainable development, we must not omit, regardless of type of analysed region, the capacity to attract external financing sources, completeing, this way, the level of local budgets' incomes. Regardless the financing source at local level, the actions of the decidents must be oriented in the sense of efficient use of the budget incomes, with direct impact upon the local/regional development level.

Future Approaches

Having in view the fact that the three types of of regions are regrouping counties with different features and performances of the local public finances, attenuating, per ensemble of each region, the county intra- and inter-gaps, a future analysis can have in view the detailing of the way of local budgets incomes' utilization and the structure of expenses made, and mainly at each county's level.

The analysis can be made also by development regions, by inscribing each component county in a rurality class. From this perspective there can be made a diagnosis analysis of each county, not only by ratio to own performance of the local finances' system, but, especially of the impact of

efficient utilization of budget incomes, concretized, together with other influence factors, into a certain development level of the local communities.

It is obvious that such approaches can be limited from point of view of the informational support available at local/regional level, not only reported to indicators' structure, but also from the perspective of the time interval.

Bibliograhy

* * *, Studiu privind stadiul actual al dezvoltării rurale și al agriculturii în regiunea Sud-Vest Oltenia și scenarii de dezvoltare în perioada 2014 – 2020, http://por2014-2020.adroltenia.ro/wp-content/uploads/2016/01/Studiu-agricultura-si-dezvoltare-rurala-.pdf;

* * *, (2017), Baza de date Tempo-Online, INS.

IMPLICATIONS OF MONEY LAUNDERING ON THE NATIONAL ECONOMY

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Abstract

Money laundering is often a criminal offense in organized crime, and the structures are reinvested in licit business by money from illicit activities, using domestic and international financial circuits for this purpose. Money laundering methods are multiple, effective and tailored to the needs of the country where the activity is carried out, etc.

Key words: national economy, national legislation, legal economy, underground economy.

JEL Classification: H25, H26, H39

Introduction

The legalization (laundering) of criminal money is a prerequisite for the operation of economic crime. Legalization of underground capital allows the world to intervene to acquire all types of property and to launch its own control over the economic and even political system of the state, legalizing illicit revenues as an essential link between the legal economy and the criminal sector of the underground economy.

Money laundering is often a criminal offense in organized crime, and the structures are reinvested in licit business money from illicit activities, using domestic and international financial circuits for this purpose. Considering this, it would be very useful to complete the legal-criminal norms to prevent and combat the investigated phenomena that form the underground economy crime sector with aggravating crimes such as the committing of these deeds by organized crime groups, criminal organizations or associations.

Money Laundering Methods

Money laundering methods are multiple, effective and tailored to the needs, legislation of the country in which the activity takes place, etc. The best known means of money laundering are: "pre-payment" (also called money placement); "Blending" (spreading / raising money); "Drying" (money recycling / integration). "Money laundering is a fundamental element of the global financial strategy of criminal groups aimed at ensuring the best placements and justifications of the financial product resulting from dirty business. This confirms the strong interpenetration between the legal economy and the criminal economy." (Broyer, Ph., 2002, pp. 7).

Organized crime activities have a secret and well-organized character, which is why they have a particularly serious social impact, and in many states they are "pernicious cancer" (http://sm.politiaromana.ro/inf_utile/crima_organizata.htm, accessed on August 28, 2017), which weakens the power of society, threatens the integrity of governments, increases the tax that adds to the commodity price, jeopardizes the security and jobs of the citizens, brings damage to the economic operators in competition, controls the money union, finally achieving a strong influence in the sphere of economic, social and especially political.

The organized crime generates around 85 billion euros a year worldwide, with drug trafficking being the most profitable of criminal activities, the UN Office for Drugs and Organized Crime (UNODC) said.

Organized crime and corrupt politicians in Eastern Europe camouflage their assets and businesses to the shelter of the offshore industry. Through incognito-style documentation and cross-border journalistic investigations, a team of Balkan reporters shows how offshore consultant networks in the region facilitate terrorist financing, arms trafficking and money laundering from South American smuggling.

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In Romania, the main character is the offshore consultant Kiss Laszlo Gyorgy. He was arrested for money laundering and complicity in embezzling 8 million euros in the accounts of Petrom Service company (current PSV Company SA). The case was investigated by the National Agency for Fiscal Administration (ANAF), which further notified the National Anticorruption Directorate (DNA). The criminal complaint states: "they were invoiced by some commercial companies on the basis of contracts, services, consultancy and management services, without the documents presented as justification for the rendered services proving the provision of these services and the necessity of doing so costs". In total, the Fiscal found out that this method has evaded over 1.2 million lei (560,000 profit tax and 657,000 VAT). Among the cases taken over by the DNA is the one described briefly in the Tax report: "Verisimo Ltd. Cyprus, represented by Promire Consultants Ltd. through Ian Taylor, invoiced consultancy services during the period July 30, 2008 to December 31, 2008 for a total of 364,32727 lei" (http://www.romanialibera.ro/exclusiv-rl/investigatii/banii-petrom-service-spalati-de-crima-organizata-205924.html, accessed on 28.08.2017).

Governments should dissolve the market saturated by the "superpowers" of organized crime that traffic in drugs, people, weapons and counterfeit goods. Criminals get billions of dollars, says Antonio Maria Costa, head of the United Nations Department of Crime and Drugs (UNODC), for Reuters, in a report by his agency. But the countries do not cooperate enough with each other and with the United Nations, and they are too focused on traffickers. "We want to start selling to the giant markets", said Costa, adding that those criminals who support the markets have turned into a well-armed transnational "superpower".

Rich countries, including the Group of Eight (G8), the rich nation's club, are also affected by organized crime. "If you look at illegal transactions, almost all of them are heading north". The largest economies on the planet, G 8 and BRIC countries (Brazil, Russia, India and China) are the largest markets for illegal trade (http://www.epochtimes-romania.com/articles/2010/06/article_83424.html, accessed on 28.08.2017).

In the case of Romania, the transition to the market economy took place under the widening of the phenomenon of the underground economy. The financial means obtained from the production of counterfeit goods or stolen goods were invested in some cases in the purchase of the shares of the injured enterprises, and the offenders became their co-owners. Another common practice in performing import-export operations is the use of intermediation of transactions by phantom companies for removal from the official economic circuit of commodities and financial means.

The existence of the underground economy is extremely important for the production of "dirty" money that ends with the massive transformation of speculative international capital. For this reason, the underground economy has an international channel through which the gray capital flows. It tends to leave the country of origin through illegal channels through banks or institutions that represent the theater of operations for international crime (Voicu, C., 1999, pp. 135).

The legalization (laundering) of money obtained by criminal activity is a necessary condition for the functioning of criminality in the economy. Financial assets or other assets obtained from criminal activities can be recycled without any danger to offenders. The legalization of "gray" capital allows criminality to acquire all types of property and develop its own control over the economic and even political system of the state. Legalizing illicit income is an essential link between the real economy and the criminal sector of the underground economy.

The economic and financial globalization, through the means of information, has facilitated the extremely rapid movement of capital, which creates new opportunities for the placement of capital from frauds and crimes. The introduction of unlawfully obtained funds into the real economy led to "the internationalization of the financial-banking crime and money laundering, as well as to the creation of new financial flows, which trace and trace the products of crime extremely difficult to achieve" (Melinescu I., Talianu, I., 2009, pp. 5). Thus, much of the money that circulates daily from one corner of the planet to the other, integrated into the financial circuits, is dirty money, expressing in monetary form the financial result of smuggling with drugs, weapons or live meat, to which the amounts obtained as a result of acts of corruption, tax fraud or frauds in the financial-banking field are added.

Money laundering is an illegal operation closely related to the specific nature of the organized crime form that initiates the process as it results from the aim pursued: the investment in the legal economy of income obtained as a result of tax fraud; investing in the legal economy the income

from traffic of any kind, frauds over the private business environment or any other illegal activity; the concealment of the origin of the amounts used for the corruption activities of some officials, the commissions paid for winning auctions or the secret financing of political parties, aiming to create a legend for the funds thus granted; masking bank loans for unauthorized purposes; masking transfers from a company account to your personal account; Hiding profits earned by stockholders within a company the need to provide funds to finance terrorist operations (Popa, Ş., Cucu, A., 2000, p. 143).

Combating money laundering through a number of specific methods supports general measures to prevent and discourage the underground economy. Measures to limit money laundering practically presuppose a counter-offensive to the underground economy, going backwards from the negative effects of money laundering. The effectiveness of these measures depends directly on the level of adaptation to the dynamics of the international framework in the field.

The globalization of the economic and financial activity of criminal groups has led to the need for international cooperation to prevent and combat money laundering. Against the backdrop of inconsistencies between national laws of different areas of interest and in the context of the loose circulation of huge funds from the organized crime industry, major financial powers have initiated the development of a unitary system of rules to prevent the use of financial systems for money laundering purposes. “Money laundering is an international business. The effective fight against transnational organized crime can only take place if the fight against money laundering is based on international standardization.” (Popa, Ş., Cucu, A., 2000, pp. 33).

Money laundering is a far-reaching offense which, by its nature, extends beyond national borders, facilitating the expansion and internationalization of organized crime groups.

The underground economy, through its adaptive capacity and the regenerative power it defines, is a serious competitor for the real economy, which is characterized, to a certain extent, by stagnation and inertia.

Dirty money laundering is the last link of the criminal chain in which the owners of important funds, obtained by fraud of state, firms, public institutions or citizens, give them a legal character, and this created financial capital enters the economic and social circuit, breaking the rules and principles competition, democracy and the rule of law. It is a fraudulent manipulation of the company’s misappropriation of their economic and financial reason and purpose, made through complicity with representatives of public institutions, banks, companies, etc.

Concluding, emphasizing the general and specific aspects of international and national crime, we should consider it appropriate to consider the following measures that could play a role in making the fight against crime more effective at national level: the urgent adoption of international standards in terms of sanctioning corruption, organized crime and money laundering; the establishment of a strong interdepartmental body made up of policemen, finance specialists and prosecutors, with the right to control, to set up orders in this field, to improve the judicial system to prevent, discover and combat criminal behavior, to develop a firm financial and banking legislation capable of to halt phenomena such as fraud and money recycling, the adoption by the Romanian Government of an effective social, economic and environmental policy.

The Council of Europe currently controls the measures taken to combat money laundering in the Central and Eastern European countries and carries out their assessment on the basis of a procedure developed by the FATF-GAFI International Financial Action Task Force to monitor how they are implemented.

Most citizens confuse the market economy with the perimeter where rebellion and speculation, theft and illegal business are taking place. Such a concept generates negative attitudes, which most often carry the form of crime. The tolerance for abuses and illegalities, manifested not only by the political factors but also by the bodies empowered to execute the enforcement of the law, is a reality stemming from the deformed perception of these structures about the Romanian society as a whole.

As a result of the security environment analysis, terrorism and recrudescence of organized crime are among the threats.

In most cases, they intertwine, so terrorism is better off, terrorist organizations are funded by organized crime networks as a result of trafficking in drugs, people, stolen cars, weapons,

explosives, etc. and of course the sums of money resulting from economic and financial crime (financial and banking), all of which add to the phenomenon of money laundering and, last but not least, corruption, which tends to generalize in all spheres and fields of economic- social.

Taking into consideration the criminal policy in this field, we consider that measures must be taken in order to increase the effectiveness of the action to counter the phenomenon of crime: legislative harmonization at EU level. on combating cross-border organized crime, financial-banking fraud and money-laundering and money laundering; the setting up within the Romanian Police of anti-mafia units with appropriate equipment and staffed and trained personnel, according to international standards; the establishment of inter-institutional departments of prosecutors, policemen and finance experts to carry out unitary and effective activities in particular to combat economic and financial crime.

The chance offered to Romania for modernization is a real one, through its membership in the United States. and N.A.T.O. This gives us, on the one hand, security guarantees and, on the other, opportunities for economic development, including overcoming the current difficulties. For that, the national partnership or national consensus must be achieved.

To the above we add that poverty also contributes to the increase of crime. There is another argument that concrete measures must be taken by the institutions empowered to combat this phenomenon and keep it under control in such a way as to avoid increasing the sense of insecurity of the individual.

Conclusions

I believe that preventing, combating and controlling economic and financial crime can be done through two categories of measures: educational and coercive. Thus, the main ways of action are: at the educational level, the building of an anti-corruption culture through morality and civic education is the best approach to the liquidation of economic and financial crime; independence and autonomy of persons qualified to prevent, investigate, prosecute and sanction fraud, who must be free from any influence incompatible with their status and have the appropriate means to obtain evidence; protecting people who help authorities fight economic and financial crime and defend the secrecy of judicial research; seizure and confiscation of goods and property acquired through acts of corruption and fraud; criminalizing the activity of legal persons that serve as a screen for shielding corruption and fraud; the limitation of any immunity in the investigation, prosecution and sanctioning of corruption and fraud only to what is necessary in a democratic society; the transparency of all decision-making acts taken by the public administration; the transparency of operations in public markets, favoring fair competition and discouraging corruption; guaranteeing the freedom of the media to receive and transmit information on corruption affairs and the criminal investigation of those who practice blackmail and levying the “protection fee” with the ban on setting up new publications by their administrators.

Bibliography

Broyer, Ph. (2002), „La nouvelle economie criminelle” in volume „Financial Criminality”, D´Organization Publishing House, Paris, pp. 7

Melinescu, I., Talianu, I. (2009), Financial Investigations in Money Laundering, National Imprimeria Publishing House

Popa, Ş., Cucu, A. (2000), Underground Economics and Money Laundering, Expert Publishing House

Voicu, C. (1999), Dirty money laundering, Sylvi Publishing House, Bucharest, pp. 135

* * * (2010), http://www.epochtimes-romania.com/articles/2010/06/article_83424.html, accessed on 28.08.2017

* * * (2016), http://sm.politiaromana.ro/inf_utile/crima_organizata.htm, accessed on 28.08.2017

* * * (2009), http://www.romanialibera.ro/exclusiv-rl/investigatii/banii-petrom-service-spalati-de-crima-organizata-205924.html, accessed on 28.08.2017

TAX FRAUD IN THE CURRENT STAGE

Raluca Ana-Maria DUMITRU[29], PhD

Abstract

Tax fraud has a large scale at local, regional or transnational level and it occupies a central place in the sphere of economic and financial crime.

The illicit activities, components of the underground economy, are those forms of income-producing crime by circumventing the state's fiscal control of essentially licit activities or the legal obtaining of funds from tax sources.

Key words: tax fraud, the underground economy, taxes and legal fees, custom duties.

JEL Classification: H20, H23, H26

Introduction

At the end of the second millennium and its beginning, marked by the era of economic and social progress, we witness a new stage of development in the history of mankind, characterized by the process of extending cross-border relations of economic, political and socio-cultural nature. In this way, at the planetary level, a network of all communities, even if they are located thousands of kilometers away, brings together countries, banks, financial institutions, etc. The phenomenon of globalization of human-community relations has generated and raises further controversy between economic analysts, sociologists, political scientists and historians.

In this context, tax fraud has a special scale at local, regional or transnational, occupying a central place in the sphere of economic and financial crime. Illicit activities, components of the underground economy, are those forms of income-producing crime (drug trafficking, cars, other acts of violence, thefts, etc.), by circumventing the state's fiscal control of essentially licit activities (import of goods, trade, production of goods, etc.) or the legal obtaining of funds from tax sources (eg repayments or unlawful compensation of value added tax). The last two components of the underground economy are in fact the forms of tax fraud.

The fiscal fraud is the "set of practices aimed at circumventing all or part of the state tax", but only partly includes the elements of the mechanisms by which tax contributions are affected.

Therefore we can define tax fraud as the entirety of the illegal actions carried out in order to evade the taxpayers from the payment of taxes, taxes and contributions owed to the state or to obtain illegal sums of money from such tax sources.

Components of the taxpayer's obligation towards state or local budgets may be diverse: corporate tax, value added tax, excise duties, customs duties and so on. In order to circumvent the criminal law by means of various illicit methods of payment of these obligations, the criminal tax offense was criminalized in the Romanian criminal law, which stipulates that the budgets that may be prejudiced are: state budget, local budget, special fund budgets and health insurance.

The terminology used is quite plausible and the scope of the illegalities in this area as well. That is why it is opted for the use of the term tax fraud and the inclusion in its sphere of the customs regime. In fact, in France where the term used in the Romanian language of "evasion" originates, it is rather equivalent to the use by taxpayers of legal facilities or gaps in legislation to avoid paying taxes and duties.

The authors of tax fraud can act in a singular, unorganized manner in the case of acts that can be framed in small criminality or organized - when the authors are associated with the purpose of committing large frauds that can seriously affect the state budget.

In the first situation, the illegal acts are incidental, short-term, while the criminal activities of the second category are characterized by stability in time, prepared with great rigor and aiming at

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obtaining great gains at the state's end. In many cases, large fraudsters networks operate internationally, juggling freight import / export in terms of quantity and price, and also benefiting from the difficulty of control institutions in obtaining data on such operations from another country. One such example is a case handled by the Romanian Police concerning massive imports of flowers in the Netherlands, at much underestimated prices, when the Romanian authorities were unable to cooperate effectively with the Dutch authorities, the latter arguing that everything is ok to them the exporter, a Dutch company, had correctly registered its revenue, although it had contributed, by certifying false data on the copy of the invoice given to the Romanian party, to the prejudice of the Romanian State.

Below are some ways of committing tax fraud: the use of phantom companies, customs offenses, VAT and other tax evasion.

a)Use of phantom companies

We consider it appropriate to analyze the “ghost companies” in the present communication as such entities are characterized by most of the underground economy analysts as “the great actors of tax evasion, smuggling and fraudulent bankruptcy and other crimes considered being dirty money”.

Since firms considered “ghost” have an important role to play in organized crime acting in the tax sphere, it is necessary first of all to clarify this term. In a narrow sense, a phantom company is defined as a fictitious entity that does not have a registered office, patrimony or real representatives, and is not constituted and registered under the procedure used for commercial companies, although on its behalf acts are issued and revenue-generating business activities are carried out.

In a broad sense, the sphere of ghost companies includes other legally established companies, registered at the merchant registration authority, with actual headquarters, but where they never work, and whose representatives (associates and/or administrators), as a rule foreign citizens who immediately left the country after the establishment of the company, left the founding documents and the stamps of others, unrelated to the company, to carry on their behalf revenue-generating business activities in order to evade taxes and legal fees.

Sometimes in the category of phantom companies are also included companies that have legally carried on and registered their activity up to a certain point in time and were transferred to persons who disappeared immediately after the company’s takeover, the act of transferring the debt to the State or creditors.

There are also cases when some people who, using false IDs, set up or take over companies and generally commit acts of deception to the detriment of other firms.

Ghost companies are the source of many tax fraud operations both in economically developed countries and in those whose market economy is undergoing consolidation.

The concrete ways in which phantom companies are used are:

- goods are imported through a phantom company, at undervalued prices, much lower than those on the market, in order to pay modest customs duties, which is imposed at a stage following the sale to another spot company, with the application of a large commercial surcharge to reach the real price, which generates large charges, corresponding to the large price difference. Import is through a company, whose administrators does not exist or will never be found, and the registered office is fictitious, no one will pay these taxes and taxes very high. In the next step, the spot company will deliver commodities with a small commercial addition, which will generate minimum tax obligations that will be paid “conscientiously” by those who actually control both companies. It goes without saying that who is faced with import control and other operations until delivery at the real price. The process is used by well-organized networks that sell large quantities of goods.
- the quantities of goods from smuggling or domestic clandestine production are justified;
- in some cases public procurement is used when a contracting authority interposes between a real supplier and the public institution such a firm for the purchase of goods for the purpose of artificially increasing the markup, well above the actual supplier’s delivery price.
- used in TVA repayment cases.

b) Customs offenses

In general, fraud in this area is amplified at level high customs duties or in the case of import protection measures. The ways in which customs duties are being circumvented are:

- smuggling which is consisting in the introduction of goods across the state border through places other than customs;
- importing goods at prices that are far below the market value, in agreement with the exporters;
- presentation of false documents concerning the quantities of goods, their quality and prices, or other indications leading to the application of a favorable customs procedure;
- hiding of goods in secret compartments of means of transport

Customs fraud occurs with great damage to the state, since in addition to paying customs duties in most countries other taxes, especially value added tax and consumption taxes, are payable at the time of customs clearance.

c) Unlawfulness of value added tax (VAT)

Value Added Tax is one of the main sources of the state budget. This tax is the subject of many tax fraud operations, its exposure being motivated by the significant amounts that are collected, the large number of payers, and the particularities of how it is calculated and highlighted:

- fictitious purchases of over-priced goods at the end of the reporting period in order to increase the deductible component of this tax in order to balance between the deductible and the collected amounts, followed by the cancellation of the operation in a new tax period;
- overestimating the value of the exports made or registering fictitious export operations, followed by the VAT refund request;
- the registration of fictitious investments on the basis of documents issued by companies or human investment companies for the purpose of obtaining a refund or VAT compensation.

d) Other tax offenses

- recording of fictitious expenses for diminishing the profit and, implicitly, of the related state tax;
- non-registration, in whole or in part, of income from commercial activities;
- failure to declare sources of income, especially for people who regularly earn income from multiple sources;
- the non-declaration of the tax generating object.

The Size of the Money Laundering Phenomenon

The interest of organized crime representatives is that, as a result of money laundering, funds from illegal sources can be used without being suspected by the authorities. This operation creates an appearance of legality, which is the immediate purpose of the holders of such funds. Sometimes some revenue hide techniques are used, even if they are legally obtained. The source of financial funds may be hidden when the interest of a person or company impose on the public, competitors, social or other institutions for reasons such as: maintaining confidentiality or privacy, maintaining reputation and competitive advantage, discouraging requests charities etc., which do not involve a criminal behavior.

Money laundering as an illegal operation is closely linked to drug trafficking and other forms of organized crime, terrorism, tax evasion or white-collar crime, which also give the specific purpose of the pursued goal, namely:

- the necessity of investing in the legal economy the huge incomes obtained of illicit drug trafficking;
- creating the necessary funds for the financing of terrorist operations;
- the justification of revenue obtained as a result of tax evasion and fraud, in investments;
- masking the amounts used for bribing government officials in order to obtain profitable contracts;
- secret funding of political parties;
- to hide the sources of financial funds for commissions that are paid for winning auctions or to mask the profits of share holders within a company;
- masking bank lending to corporate objectives unauthorized or transferring funds in the personal account.

It is impossible to calculate exactly how much money is washed worldwide every year. Those concerned with the estimation of the money laundering phenomenon have as a point of reference

an estimate, namely the net criminal product, calculated mainly on the basis of the revenues obtained from the drug trafficking.

The International Monetary Fund and the International Investment Bank consider that it is inconceivable a direct estimate of the monetary flow of drug trafficking worldwide, based on bank statistics and the balance of payments. Accounting disparities between different countries can be analyzed, but there is no possibility of destroying financial funds resulting from illegal drug trafficking and arms trafficking or other significant criminal activities. It is assumed, however, that the money supply resulting from drug trafficking accounts for less than 50% of the total financial funds worldwide.

Regardless of the exact amounts that are recycled annually by various methods, the money laundering phenomenon is quite large and present in all countries of the world, regardless of the level of economic development and the existing political system. This stems from the permanent need to use illegally obtained funds. In a case investigated by the London-based Combating Crime Unit, it emerged that a Caribbean bank was offered $ 9 million by an unidentified financial group to accept a $ 300 million deposit. Banking officials were tempted by the offer and accepted the “deal”, but the government authorities discovered it and suspended the bank’s license.

Money Laundering Methods

- *Money laundering in financial institutions*

Each financial institution, including banks, insurance and lending agencies, currency exchange offices and casinos, is a potential target for criminal money laundering organizations. Almost any type of service provided by financial institutions is a potential means for money laundering.

- The refining of illicit money is the process of converting small banknotes into large banknotes. Refinement applies especially where there is a large volume of small money, such as drug sale and purchase operations. The consumer pays the drugs in small value banknotes in relation to the purchased dose.
- Opening of bank accounts under false names is done with the consent of certain banks that do not claim their customers' identification data, thus facilitating the money laundering process.
- Hiring safes to hide values obtained with money from illicit sources is a method of concealing the criminal product.
- Facilitating financial transfers by banks or other financial institutions in such a way that illicit money reaches its destination.
- Deposit in bank accounts or transactions involving amounts of offenses without such transactions being reported.

- *Use of casinos and gambling*

Casinos are ideal places for criminals who visit them as it offers the opportunity to cheat on unskilled players and to wash their dirty money.

Also in casinos those interested can change their “street money” by buying gaming chips, after which the refining operation ends by changing the chips at home, with the end of the game, in large banknotes or casino checks.

- *Mixing money with those obtained from legal business*

The illicit funds mixed with cash money legal business products are perfectly masked, especially when declared as taxable income. Tax is the price paid by money launderers to enjoy the product of their offenses.

- *Acquisitions of secret actions*

Financial investments for the purchase of shares for the purpose of money laundering are usually made through intermediaries. Thus, in the share register of some companies there is only the name of the intermediary and not the real owner. As intermediaries, individuals, lawyers' offices or bankers are used, who often do not even know the real owners for whom they brokered.

- *Purchase of art objects or valuable collections*

Due to the fact that those who purchase objects of art or collections of higher value are protected by anonymity for obvious reasons, the owners of such values are also considered owners. Often the transfers made with such objects hide a money laundering operation. The benefit achieved can justify a high standard of living secured from rogue money.

- *The process of the fake process*

The technique is considered very simple and especially safe. The only downside is that the trials are generally lengthy, but the inconvenience can be avoided by resorting to the arbitration procedure, very widespread in international trade.

Effects of Money Laundering Phenomenon

The most direct consequence of money laundering is the possibility of the primary interest of the representatives of the criminal economy to dispose of the proceeds of the offenses they commit, without being held accountable for their illicit activities.

Another negative effect of money laundering is the unfair competition of companies anchored in the legal economy by criminal organizations.

Conclusions

The growth of underground economy and money laundering affects the force of the legal financial community. The huge sums of money subjected to hygiene have an overwhelming influence on corruption.

Money laundering can affect the economic and political system to such an extent that a country can be used only to enrich such a category of people.

Bibliography

Melinescu, I., Talianu, I. (2009), Financial investigations in the field of money laundering, National Printing Works

Negru, R. (2011), Money and power, National Publishing House

Popa, Ş., Cucu, A. (2000), The underground economy and money laundering, Expert Publishing House

Voicu, C. (1995), Dirty money and organized crime, Artprint Publishing House

Voicu, C., Ungureanu Ştefănescu, G., Voicu, A. C. (2003), Investigating bank financial crime, Polipress Publishing House

ON INFORMAL UNDERGROUND FINANCE

Monica Florica DUTCAŞ[30], PhD(c)

Abstract

The paper starts from the observation that the financial sector has an informal, unofficial and unregulated segment, less visible, but which still has its importance.The specialized literature refers to what we call the informal financial sector using a multitude of terms: Informal Credit Market, Informal Financial Sector, Unorganized Money, Non-Institutional Credit, Black Money, Indigenous Banking Sector, Parallel Money, Underground Money Markets, etc.A score of issues and considerations will be presented in the category of "underground" informal finance and its implications in economic practice.At the end of the paper, some identified features (whether they are illegal or/and not allowed socially, clients are speculative, a violent attitude in the event of incapacity to pay of client default, predatory fees, etc.) will be subject the debate to clarify the difficulty of evaluation and analysis in relation to the importance for the informal sector.

Key words: financial market, financial policies, informal financial sector, lending market, monetary system banking system

JEL Classification: G23, G41, H26

Introduction

Worldwide/throughout the world, both for economic (economic) and social (human and citizen) reasons, but also for political reasons (weak political institutions that lead to corruption and defective relations between governors and citizens, non-compliance with legal regulations which causes large tax evasion), the question of the informal economy is at the forefront of attention. The issue of the informal economy and the underground finances, both at the scientific level and on the level of the appropriate economic policy, is a stringent one.

At EU level, the Administrative Co-operation Directive is in place, according to which Member States exchange information on all forms of financial income. This regulation was extended by an agreement to combat tax evasion that would bring European Union standards at the level of world regulations in the period 2017-2018, to a standard agreed by the Organization for Economic Co-operation and Development (OECD), which provides for automatic exchange of information between countries and jurisdictions so that it is easier to identify those who escape the tax by moving money abroad. The EU's aim is to ensure that member countries exchange information as they are committed to doing with the United States under the Foreign Account Tax Compliance Act.

Consequently, addressing a subject of scientific research aimed at defining underground finances, identifying the mechanism of occurrence and establishing relationships between underground finances and the informal financial system, namely the informal economy, as a basis for assessing the possibilities, ways and results of public policy interventions mainly financial policies) in the management of the problem, the underground financial system appears to be opportune.

The study addresses a component of this complicated and current theme, the theme of the informal economy. In particular, it refers to a component of informal finances, namely their "underground" structure, a subject that can lead to a scientific research approach, even a multidisciplinary research approach.

This analysis considers several considerations and a score of underground informal finances to define conceptually and establish the place of underground finance in the informal economy. Romania's economy, especially after 1989, is an emerging economy in a process of transformation and economic and financial structuring that knows the influences of underground informal finances and does not have a formula for their management. Informal finances are a vulnerability of this economy. Fighting tax evasion, corruption, black money is a continuing concern for governments that translates into complex strategies, associating macroeconomic policies and specific policies.

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The overall objective of the analysis is to delimit conceptually and methodologically the category of underground informal finances within the informal financial sector. Thus, the specific objectives of the analysis concern:

• O1 establishing the theoretical foundation of the concept of "underground informal finance";

• O2 assessment of the implications in the economic activity.

For the "underground" component, we started from observing reality and identifying characteristics (for example, being illegal or / and not allowed socially), then followed a first conceptualization just needed to assess the implications in reality and eliminate the measurement difficulties the size of the underground sector. We mention that we were only interested in microeconomic processes. We did not analyze the sources of macroeconomic financing, but only the microeconomic ones.

Description of the Problem

The informal financial sector - a component of the informal economy

Through this analysis, we propose conceptual clarification of the "underground" component of informal finances. Terminology is not consecrated and, of course, can be improved. It is a phenomenon whose importance causes the challenge to support a conceptual point of view and to delimit it, trying to eliminate the ambiguity of the notions currently used.

The purpose of the paper is not to review the notions, nor to criticize the conceptions made so far by theoreticians, but to establish a consistent understanding of the issues discussed later in this research.

The concept of informal economy has been introduced in the literature since 1972 by the International Labor Organization, but the literature does not indicate a unitary definition of the "underground" component. This definition refers mainly to 'black' work, which is always illegal and clandestine. Other unusual and undeclared production activities or services may be included here.

In fact, from the beginning, first in 1955, the term was used in connection with work, more specifically with the generation of jobs in the economies of developing countries by W. Arthur Lewis[31] through the model that bears his name Dual Sector Model, showing that the labor force surplus in the traditional agricultural sector is being transferred to the modern industrial sector, whose growth, over time, absorbs the surplus labor, promotes industrialization and stimulates sustained development. And those who do not find formal, legal employment in the industrial sector become participants in the informal economy.

At the International Labor Conference, on Decent Work and the Informal Economy, in 2002 the term "informal economy" was used to replace the term "informal sector" and means "all economic activities that are - in law or in practice - are insufficiently regulated by formal agreements "(International Labor Organization, 2002)[32].

An examination of the economic implications of the shift of economic activity in the observed sector, registered to the unregistered, hidden and uncontrolled sector of the economy, is carried out by Feige (2007)[33]. He demonstrates that such a change not only reduces the government's ability to collect revenue but can also influence the nation's IT systems and can therefore lead to wrong political decisions. The paper analyzes alternative means of estimating the size of various unseen economies and examines their consequences in both socialist and market-oriented economies.

Unnoticed economy is the widest compared to other concepts, as it includes: informal production, illegal production, underground production, own final production and unregistered production. It is the total of economic activities that are obscured by statistical observations.

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[31] Laureate of the Nobel Prize for Economics in 1979

[32] Resolution and conclusions concerning decent work and the informal economy, adopted on 19 June 2002, ILC, 90th Session, Geneva, 2002, http://www.ilo.org/public/english/standards/ relm/ilc/ilc90/pdf/pr-25res.pdf

[33] Edgar L. Feige, "The Underground Economies: Tax Evasion and Information Distortion." University of Wisconsin, Madison, 2007 p. 73

Activities of *the unseen economy* are, according to the National Accounts System 93 (SCN 93) and the European System of Accounts 95 (ESA 95), the following specialized concepts and terminology are known: illegal, underground (or hidden), informal. National accounts meet the definition of non-registered economy, which includes non-registered production activities either by administrative authorities or in statistical data sources. This situation occurs when: the activity performed is illegal, there is no legal obligation to register, the non-registration is void (ie it is a deliberate action, the main reason being the tax evasion). National accounts also operate with the notion of under-traded economy, which refers to reporting lower values than reality (sub-reporting). Data provided by economic agents is not consistent, and component reporting costs are higher than results. The final result is the undervaluation of the profit of the economic agents. Non-registration and sub-reporting can be identified in the underground economy / hidden in both formal and informal sectors.Illegal economy includes: the production of goods and services the sale, distribution or possession of which is prohibited by law or the production of lawfully-lawful activities when they become unlawful because they have been carried out by unauthorized producers (eg unauthorized producers of alcohol, unlicensed medicines, non-accredited healthcare providers, etc.).

The gray economy consists of different types of small businesses that seem legal, but which practically violate the law to a great extent (in terms of tax payments, for example, no fiscal receipt is issued at each sale, income is not recorded, no tax is paid; in the case of employment contracts, for example, an employment contract is drawn up for 2 hours and the activity corresponds to the 8-hour program, the full payment of the contributions to the insurance system and the payment of the salary tax etc.).

The scope of *the underground or hidden economy* - hidden from an economic perspective - is the legal production activities but is deliberately hidden from the public authorities for reasons such as: non-payment of income taxes, value added tax or other taxes, non-payment social security contributions; avoiding administrative procedures, etc. From the point of view of statistical measurement, the notion of "hidden" should be interpreted as refusing to fill in questionnaires that collect data for statistical surveys or other administrative documents and for the purpose of deliberate subtraction. The underground economy comprises the unregistered and under-traded economy.

The black economy involves illegal types of activity (production and trade in drugs, prostitution, illegal production and arms trafficking, black market operations, etc.). This includes clandestine manufacturing workshops (in the textile, leather, footwear and apparel industry), services of various types (pseudo / para medical, guessed coffee, gambling cards). Their emergence in some countries is due to the availability of cheap labor or to illegal migrant workers.

A comprehensive definition of the underground economy is given by Pestieau (2005), ie "all economic activities that are carried out outside criminal, social or fiscal laws or which escape the inventory of national accounts"[34].

There is often a considerable overlap of concepts and the possibility of easily changing the terms used to become ambiguous and unclear. With the growth and modernization of the economy, the informal economy also grows, and the attempts to measure and sizzle it struggle with the difficulty of defining it. What can be said is the existence and evidence of this segment; also, the fact that this type of economic activity is ubiquitous, exist in market economies and economies with centralized planning, both in the developing ones and in the developed ones.

The informal economy does not exist and does not manifest itself separately from the formal economy, but relates to it, sometimes it produces it and makes a significant contribution to the creation of GDP. In this economy there are results that are disseminated in the global economy, namely, distributed, used labor force, income is obtained and consumed. The informal economy distributes products and services, so it concludes transactions in monetary or non-monetary form, creates or influences markets, changes prices and behaviors. In conclusion, it has effects on the markets, on the balance in the real economy, on the state budget, on the trade balance, on the monetary equilibrium.

It has been shown in the first part of the section that there are multiple meanings that can be

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[34]Pierre Pestieau "The Welfare State in the European Union - Economic and Social Perspectives", Oxford University Press, USA, 2005, p 49

assigned to the concept of informal and informal economy and that interpretation in different ways depends on the size and characteristics of economic activity.

In Schneider (2002) we find a clarification of the boundaries between activities involving monetary transactions and those involving non-monetary transactions as shown in the following table:

Table 1

Taxonomy of types of underground economic activities[35]

Type of activiti	MonetaryTransactions		Non-Monetary Transactions	
Illegal activities	Trade in stolen goods, trafficking and drug manufacture, prostitution, gambling, smuggling and fraud.		Troc of drugs, stolen goods, smuggling, etc. Production or cultivation of drugs for their own use. Theft for own use.	
	Tax evasion	Tax avoidance	Tax evasion	Avoidance of taxes
Legal Activities	Unreported income from wage-earners and assets from undeclared work related to services and legal products	Reductions granted to employees, benefits	Troc of services and products / legal goods	Marginal services and products / legal goods Activities provided for personal or for assistance purposes neighbors

Source: Schneider, Friedrich, "Size and measurement of the informal economy in 110 countries around the world, July 2002, p. 4

Thereby, we can observe underground financial activities (payments, receipts), both legal and illegal. It is obvious that they are caused by financial imbalance and instability at different levels: individual, microeconomic and macroeconomic.

Based on the definitions in the above-mentioned literature, we examine some criteria for the existence of the "underground" component of the informal structure of the financial system:

- *The criterion of institutionality* refers to the degree to which the structures of economic / financial activity are regulated by the state. Underground informal finances (FIS) are not institutional - they violate the criterion, they are an informal component of the financial system.

- *The criterion of legality* refers to the extent to which it complies with the legal provisions regarding the organization, the object of activity, the way of functioning, the way of attracting the resources. FIS are not legal - they violate the criterion, they are an illegal component of the financial system

- *The transparency criterion* refers to the degree to which it is registered, according to the regulations in force to be monitored and controlled by the responsible public authorities. FIS violates the criterion, I am an unregistered component of the financial system.

- *The criterion of administrative* compliance refers to the degree to which it is reported to public institutions. FIS violates the criterion, I am an unrecognized component of the financial system.

- *The criterion of observability* refers to the extent to which underground financial activity is accessible from the informational point of view, to the publicly competent structures. FIS can be observed, although it is a less visible component of the financial system.

An analysis of the reasons leading to the appearance and maintenance of the FIS reveals the following general causes:

- high tax burden (avoidance of taxes and social contributions, sometimes even of taxes, especially the tax burden on labor is the one that determines the work of "black", but it also influences the "debt", because the informally employed persons do not qualify for obtaining a bank loan, not having a contract of employment).

- the state institutions are of poor quality (the confidence and loyalty to the state and its institutions

[35] *The structure of the table is taken from Lippert and Walker (1997, p. 5) with personal observations, as Schneider notes in the cited paper.*

is diminishing, fiscal morality is deteriorating, the psychological contract works in the negative sense - voluntary compliance with the tax obligations is avoided, tax evasion is being pursued voluntarily).

Knowledge, the correct and effective application of the fiscal code and other financial-banking regulations play a crucial role in the hidden economy, namely underground financial co-penetration. We can appreciate that bureaucracy and corruption favor FIS development. The costs of creating a business, the length of a loan, the duration and the value of the tax, the insolvency processes, are also factors that favor the development of this sector.

- economic cyclicality is an element that determines the size of the "underground" structure;

- many ambiguous legal regulations, especially on the labor market;

Based on the above-mentioned observations, we propose a list of the causes that can generate the "underground" structure of informal finances in the following table:

Table 2

Mechanism of production / causes of underground "underground" substructure of finance

Nr. crt.	General Causes	Financial sector specific causes
1	formal	failure of the central bank
2	managers	weak fiscal control
3	structural	organization of cartels and trade unions
4	conjuctural/circumstantial	globalization

Source: bibliographic processing of authors

Formal causes - incomplete, ambiguous or inconsistent normalization determine the behavior of the economic actor, namely illegal behavior (the law is defeated), paralegal (exploited the letter of law) or metalegal (exploited the spirit of the law).

Managerial Causes - Lack of Governance Skills reflected in Financial and Tax Arrears.

The structural causes, namely the non-realization and the non-observance of the private property, lead to bureaucracy and corruption at the level of the legal financial institutions for obtaining financing, which leads to the preference for other available forms of credit.

Conjunctural causes: eg: globalization - opportunities in the field of illegal activities (chivalry, pyramid games, speculation, gambling).

The specific causes of finances mainly relate to the government's inability to observe and manage these activities.

Among the FIS effects we can list:

- Formal spending of money generated in underground activities. It is a potentially positive effect.

- Effects on quality of life are of the opposite direction, because they do not create the premises of a healthy and active life.

- Stimulate unfair competition among businesses, illicit trade in alcohol, tobacco, fuel, smuggling and illicit trade.

- Reducing the quantity and quality of public goods and services (eg infrastructure, education, health, etc.).

- Distorting certain official indicators (eg unemployment rate, the evolution of excise duties in relation to illegal trade).

- At the individual level, an increase in welfare, even slow, leads to a decrease in the use of funding from the underground system

As regards measures to combat the underground nature of the financial system, it can be concluded that systemic solutions can be more effective than punitive measures:

- Decline in taxation (taxes and reduced contributions, taxes effectively spent).

- Reducing declarative / administrative regulations and obligations.

- Reducing corruption and bureaucracy, increasing the efficiency of the public sector.

- Treating taxpayers as partners in their relations with tax authorities.

- Financial education of individuals on the personal budget, the purpose of taxation and taxation, calculation of interest on credits, calculus of time to savings, etc.

- Encouraging electronic payments without cash.

Case Study on Informal Commercial Lending

In this section, we present the results of an empirical research on the use of informal commercial credit. The study was based on the premise that the sale of products on debt is an old practice and maintained in the activity of small traders, regardless of the degree of development of the economy.

Methodology and Data Sources

Methodological Aspects

Between June and August 2017, we approached 27 retail stores and their representatives for research.

a) Volume and structure of the research population

The study was conducted on a sample of 108 people with the following features:

Country of origin: rural (100%), aged 20-80 (97), of which 14% employed, 67% pensioners and 19% non-occupation. Those interviewed were 38% of women and 62% of men.

b) The method of choosing the participants

Two methods were used:

1) Simple random sampling (randomly selected customers of the participating firms).

2) Opportunity-based sampling (decision-makers, or their representatives from 27 trading companies, from 3 counties (Satu Mare, Iasi, Ilfov) were elected.

c) Research methodology

The methodology I used in this exploratory-descriptive, investigation, and description of "credit on the notebook" as a form of manifestation of the informal "underground" financial system focused on both quantitative and qualitative aspects. In the first part, we used the sociological survey by applying a questionnaire. The questionnaire was administered individually between June and August 2017.

The questionnaire was built from 3 simple, closed questions, with 2 variants of an answer and an open question:

Q1. Are you accustomed to buying the "notebook"? R1. YES NO

Q2. Up to what value? R2. ≤100 lei /> 100 lei

Q3. What is the pace of payments? R3. Weekly / Monthly

Q4. Why do you call "notebook"?

The questionnaire was applied to 108 people, of which 27 representatives of the "creditor" and 81 beneficiaries of the "credit".

Instruction for completing the questionnaire aimed at self-esteem and direct, honest answers to Q4, with the possibility of developing the answer. Completing the questionnaire lasted about 10 minutes.

d) Results Obtained

Participants' response rate was 100%. The results show that in 90% of the reputable stores sell on

"debt", "on the notebook". The remaining 10% no longer continues this practice for fear of the consequences of controls.

The informal commercial lending operation has the following steps:

- From the store, the customer chooses whatever goods he wants. If he does not have money on him or does not have enough available money, he enters in the notebook with the following information: name and surname, date, products (briefly listed, sometimes this field is not filled in, and in some notebooks does not exist).

- Because the payment is not actually made, no tax receipt is issued, the merchant does not pass the merchandise through the accounting and does not pay income tax / profit tax.

- The customer pays the merchandise when it is available at the sale price that also includes the sales add-on of the seller, but does not pay interest on the debited amount.

- When the client - the debtor pays, the balance in the accounting is established, the statements are drawn up correctly and the money is paid to the budget (in some cases).

What the trader assumes: the risk of tax control that can cause very large fines and the risk of not getting the given goods.

Customers - debtors have no risk or additional cost. They are low-income people with fixed earnings on salary, allowances, or pensions. Debt value fluctuates between 25-75% of revenue and closes once a year or a year and a half.

In order to avoid "tax evasion", even for a short, technical time, the sale could be done on the basis of a tax invoice with the payment on time, namely when the debtor comes out of the "notebook" would turn into a supplier credit for the consumer**.**

Conclusions

We find the existence of several functions of the "underground" structure of the financial sector, as follows:

1. The Shock Absorption Function - We can talk about the absorption function of both economic shocks by amortizing the shocks that occur either in the goods and services market or in the labor market, the money-market and the institutional shocks, which are, in most cases, the cause of economic shocks. In fact, the two types of shocks are exploited to provide substantial and unclaimed profits.

2. The function of covering economic "gaps" - The underground structure is interested in economic needs where formal finances are not open or needing an insufficiently motivating profit rate for them. Most of the time, they exploit resources and opportunities that are ignored or folly incomplete from the formal economy, thus becoming complementary to formal structures. (which we are going to reflect on).

3. Calculation of cost-of-opportunity costs of economic decisions - Calculates a kind of shadow prices that represent for any economic subject the cost of the real economic decision.

4. Signaling function on resource allocation, economic behavior, relative prices - Sends signals on economic and especially financial resources: their structure, degree and quality of use; on adverse effects on economic behavior; on the relatively real price, different from the official one.

The effects of the "underground" structure of finance:

1. Creating parallel markets

2. Changes in consumption and saving behavior, respectively the misappropriation of money

3. Undermining formal finance

4. Reducing fiscal fiscal revenues through non-payment of budgetary obligations

Finally conclusion:

✓Underground finances are "inevitable„

✓The underground finance component can not be liquidated

✓The underground economy is an obstacle to the country's economic growth and, implicitly, to the standard of living
✓It must be known for use by appropriate government management.

Future Directions to Be Approached

✓Analysis of the relationship with the formal financial sector (competition or complementarity)

✓The informal financial sector - a specific approach for Romania

✓Assessing the possibilities of estimating the size of the sector in Romania

Bibliography

Allen, F., Quian, J., Quian, M., 2003, Comparing China's Financial System, China Journal of Finance, vol. 1, pp. 1-28;

Asian Development Bank, 1990, Asian Development Outlook 1990, https://www.adb.org/sites/default/files/publication/180565/ado-1990.pdf;

Dinga, E., 2016, Economic cyclicality, Romanian Academy Publishing House, Bucharest;

Feige, E.J., 2007, The Underground Economies:Tax Evasion and Information Distortion, University of Wisconsin, Madison;

Krugman, P., 2009, The Return of the Decline Economy and the Crisis in 2008, Publishing House, Bucharest, 2009;

McMillan, R., 2006, Formal and Informal Credit and Savings Markets in Rural Guatemala: Accessibility, Sustainability, Perception, and Evidence for the Existence of Both Types of Institutions, https://apps.carleton.edu/curricular/ocs/guatemala/ assets/McMillan.pdf;

Minsky, H.P., 2011, How to stabilize an unstable economy, Publishing House, Bucharest;

Pelinescu, E., (coord.), 2002, National Economy and Integration in the European Union, Bucharest, Economic Information and Documentation Center, Economic Studies and Surveys, vol. 8;

Pestieau P., 2005, The Welfare State in the European Union - Economic and Social Perspectives, Oxford University Press, USA.

Schneider, F., 2002, Size and measurement of the informal economy in 110 countries around the world", http://citeseerx.ist.psu.edu/viewdoc/download?doi =10.1.1.534.406&rep=rep1&type=pdf;

Schneider F., 2016, Estimating the Size of the Shadow Economies of Highly-developed Countries: Selected New Results, CESifo DICE Report 4/2016 (December);

Schneider, F., Buehn, A., 2016, Estimating the Size of the Shadow Economy: Methods, Problems and Open Questions, IZA DP Nr. 9820, Institute for the Study of Labor

* * *, European Central Bank, 2012, Virtual Currency Schemes, http://www.ecb.europa .eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf;

* * *, GDRC, Comparing Formal and Informal Financial Sectors, https://www.gdrc.org/icm/formal-informal.html;

* * *, International Labour Organization, 2002, Resolution concerning decent work and the informal economy, The General Conference of the International Labour Organization, meeting in its 90th Session, http://www.ilo.org/public/english/standards/ relm/ilc/ilc90/pdf/pr-25res.pdf;

Websites:

* * *, Professional Association of Issuers ticketshttp://www.apet-romania.ro;

* * *, Financial Supervisory Authority https://asfromania.ro;

* * *, The National Bank of Romania http://www.bnr.ro/Home.aspx;

* * *, European Central Bank http://www.ecb.europa.eu;

* * *, Global Financial Inclusion DataBank (Global Findex) http://databank.worldbank.org;

* * *, International Labour Organization http://www.ilo.org/;

* * *, Women in Informal Employment: Globalizing and Organizing http://www.wiego.org;\

Legislation:

* * *, The government of Romania, 2011, Ordinance no. 13/2011 regarding the legal interest payable and penalizing for money obligations, as well as for the regulation of financial-fiscal measures in the banking field;

* * *, The government of Romania, 2012, Emergency Ordinance no. 93/2012 regarding the establishment, organization and functioning of the Financial Supervisory Authority;

* * *, The Parliament of Romania, 1998, Law no. 142/1998 regarding the grant of lunch vouchers;

* * *, The Parliament of Romania, 2004, Law no. 312/2004 on the Statute of the National Bank of Romania;

* * *, The Parliament of Romania, 2009, Law no. 93/2009 on non-banking financial institutions;

* * *, The Parliament of Romania, 2009, Law no. 287/2009 on the Civil Code;

* * *, The Parliament of Romania, 2011, Law no.127 / 2011 on the issuance of electronic money;

* * *, The Parliament of Romania, 2011, Law no. 216/2011 on the banning of the activity of custody. Law of Shame;

* * *, The Parliament of Romania, 2015, Law no. 148/2015 regarding the approval of the Government Emergency Ordinance no. 94/2013 amending and supplementing the Government Emergency Ordinance no. 93/2012 on the establishment, organization, and functioning of the Financial Supervisory Authority, as well as for amending and completing the Law no. 136/1995 on insurance and reinsurance in Romania.

Presentation of the results of the questionnaire on informal commercial crediting

Question	Number participants	Response options	
Q1		Yes	No
"Are you accustomed to selling on the notebook?"	**27**	24	3
		89%	11%
"Are you accustomed to buying on the notebook?"	**81**	68	13
		84%	16%
	108	85%	15%
Q2		<= 100	>100
"What is the sales limit on the notebook / month?"	**27**	24	17
		89%	63%
" What is the limit of purchase per notebook / month?"	**81**	56	63
		69%	78%
	108	74%	74%
Q3		weekly	Lunar
"What is the rhythm of the proceeds?"	**27**	5	19
		19%	70%
"What is the rhythm of payments?"	**81**	15	53
		19%	65%
	108	19%	67%
Q4			
"Why do you call/use "notebook"?"	**27**	'People are in need here in our county. They are old people alone and until the pension comes to eat. "	
		'Because people have no money and I keep too much my best merchandise on the shelf."	
		' In this period are weddings and so I think to help them, they will only pay for what they consume after everything is over"	
		'It is charity, people are so upset. I think I'll help them, they'll pay after everything's over and just what they're doing, the rest I get back. "	
		'If I do not give them, they give X .and I stay with my lips swollen / ruined merchandise /my proud / etc."	
	81	'That's how we get used to, and it's easier to handle, that little money we have."	
		'We do not get to go from one month to the next and if we have many medicines we have to take on debt"	
		'Only when the children come home, then there are more hands to work!"	
		'They allow this loan. There are people in fear of God, like us. Do not fool each other "	
		'Need and not pride."	

When asked if the lent amount higher and lower than 100 lei, some checked both.

We counted:

12 common responses, 12 under or equal to 100, and 5 just over 100.

ESTIMATION OF A LINEAR IS CURVE FOR ROMANIA

Gabriela - Mariana IONESCU[36], PhD(c)

Abstract

The fiscal-budgetary policy is included in the economic policy of a country, addressing the set of public measures and institutions aimed to ensure a macroeconomic equilibrium of the real economy.

The paper specifies, estimates, and analyses, from a qualitative as well as a quantitative point of view, a linear equation of the fiscal-budgetary policy in Romania, of the type IS (investment-saving), econometrically built, for the period 1995-2016, using official statistical data at the macroeconomic level. Data series that are analyzed using an econometric model are final consumption of households (private consumption) and gross fixed capital formation of non - financial corporations (private investment).

Keywords: IS curve, fiscal-budgetary policy, real economy

JEL classification: C51, H30, E62

Introduction

Analyzing the evolution of GDP components, there has been an increase in expenditure for final consumption of households in our country and in the economies of the EU member states. Concerning the investment developments, the vast majority of investments were made in the private sector. In order to understand the fiscal - budgetary measures that are imposed at the level of the national economy, the present paper models the mathematical, statistical and econometrical the data series of two very important indicators in the analysis of GDP evolution. The Romanian economists' concerns related to the analysis of these indicators are found in the specialized literature, materialized in scientific papers containing observations for the analyzed periods. The fiscal variables analyzed in this paper will be able to formulate a few theoretical conclusions on GDP developments.

Description of the Problem

In achieving its macroeconomic and social objectives, the state establishes its own economic policy that includes adjustment policies adopted to ensure the necessary budgetary revenues. One of the most common adjustment policies is the fiscal policy one. Having macroeconomic objectives at the Government disposal, fiscal policy can also be considered in the public policies category by means of which the state ensures the society members' welfare.

The fiscal policy concept can be defined as a kind of adjustment public policy which included the set of rules, institutions and procedures that are designed to manage, from the public authority perspective, the macroeconomic equilibrium in the real economy by controlling the tax rates trajectory and government expenditures [1].

The main fiscal policy characteristics are presented in the figure 1.

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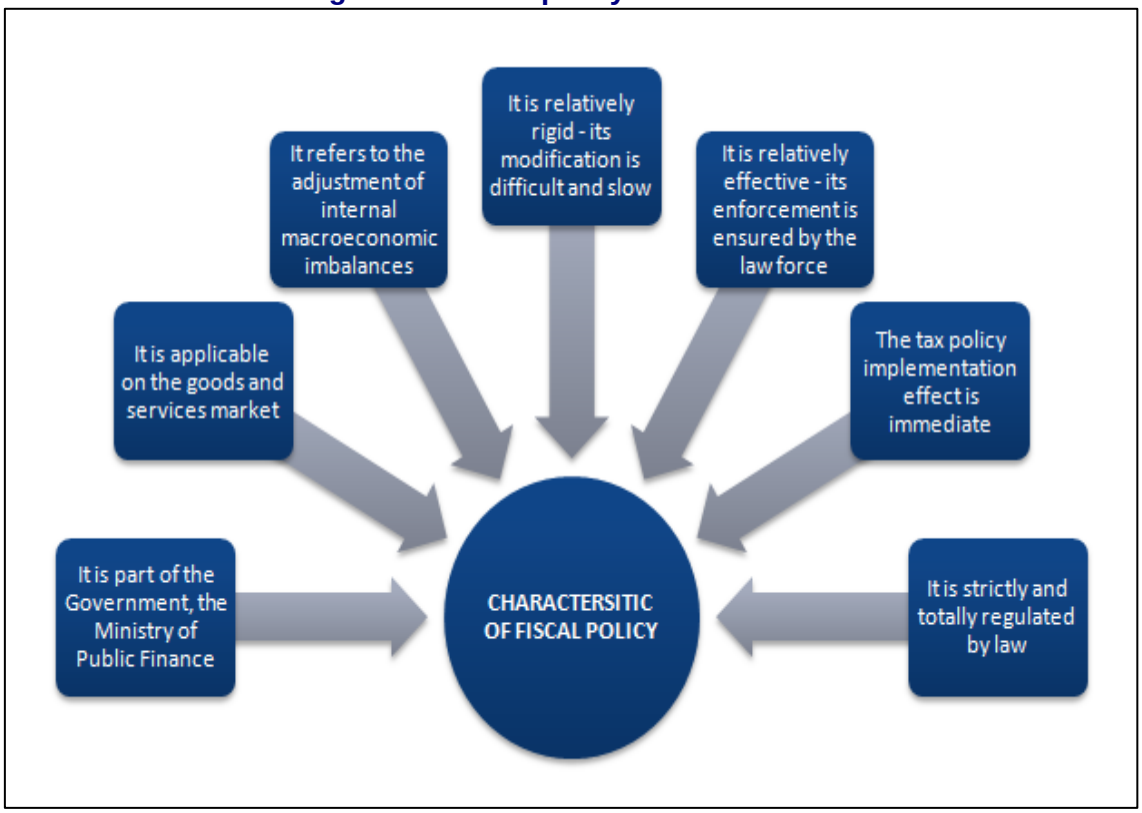
Figure 1 – Fiscal policy characteristics


It is relatively rigid - its modification is difficult and slow
It refers to the adjustment of internal macroeconomic imbalances
It is relatively effective - its enforcement is ensured by the law force
It is applicable on the goods and services market
The tax policy implementation effect is immediate
It is part of the Government, the Ministry of Public Finance
CHARACTERSITIC OF FISCAL POLICY
It is strictly and totally regulated by law

Source: author's work

Financial resources for achieving macroeconomic objectives assumed by the state, are ensured through the four tools of fiscal policy: taxes, payments for public services, other mandatory levies, and government expenditures.

One of the fiscal policy objectives is also to ensure and maintain the macroeconomic balance on the goods and services market. According to the equilibrium macroeconomic equation the aggregate supply on the goods and services market must be equal to the aggregate demand for goods and services on this market (the case of a closed economy).

Macroeconomic equilibrium equation (case of a closed economy):

$Y = C(Y_d) + I(r)$, where $0 < C'(Y_d) = \alpha < 1$, $I_r^{'} < 0$ (1)

where $Y_d = Y - t(Y)$, and t(Y) – direct tax

Then,

$Y = C[Y - t(Y)] + I(r)$, where $0 < t'(Y) < 1$ (2)

Applying an elementary (differential) calculation of the previous relationship we obtain:

$dY = C'(Y) \cdot [1 - t'(Y)]dY + I'_r\, dr$ (3)

$dY \cdot \left[1 - \alpha \cdot \left(1 - t'(Y)\right)\right] = I'_r\, dr$ (4)

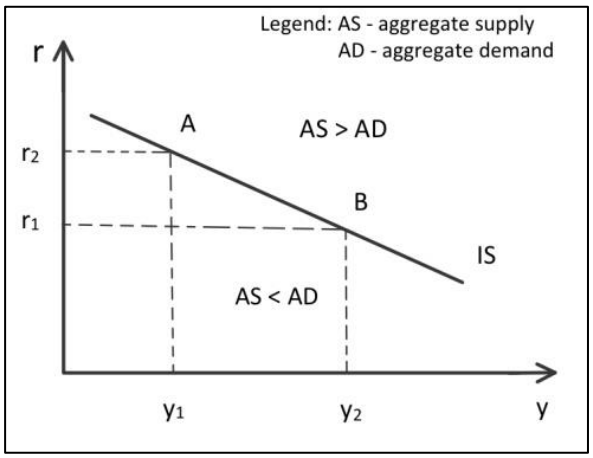
$\frac{dY}{dr} = \frac{I'_r}{1-\alpha\cdot[1-t'(Y)]} < 0$ (5)

$dY\ /\ dr$ is the slope of the line $Y = y(r)$ is called as: IS (investment saving).

The IS function indicates the equality of savings and investments on the goods and services market: $I = S$.

The IS graphic representation is shown in the figure 2.

Figure 2 – Representation of IS graph



Source: author's work

Based on an econometrical model, this paper presents a quantitative analysis of two series of final consumption indicator data for households and gross fixed capital formation of non-financial corporations, indicators that have contributed significantly to last year's economic growth in Romania.

Methodology and Data Sources

From indicator analysis, which determines the change over GDP, households final consumption and gross fixed capital formation of non-financial corporations were selected. The first indicator analyzed is an important component of GDP and is a constant concern of the welfare economy, the second indicator is geared towards long-term growth in private consumption. The mathematical modeling of the two indicators was done using the IS equation, as shown below:

$$Y = \alpha \cdot C_{pr} + \beta \cdot I_{pr} \quad (6)$$

where:

Y – total income (Nominal GDP)

C_{pr} – final consumption of the population (private consumption)

I_{pr} – gross fixed capital formation of non-financial corporations (private investment)

α, β – parameters of the equation

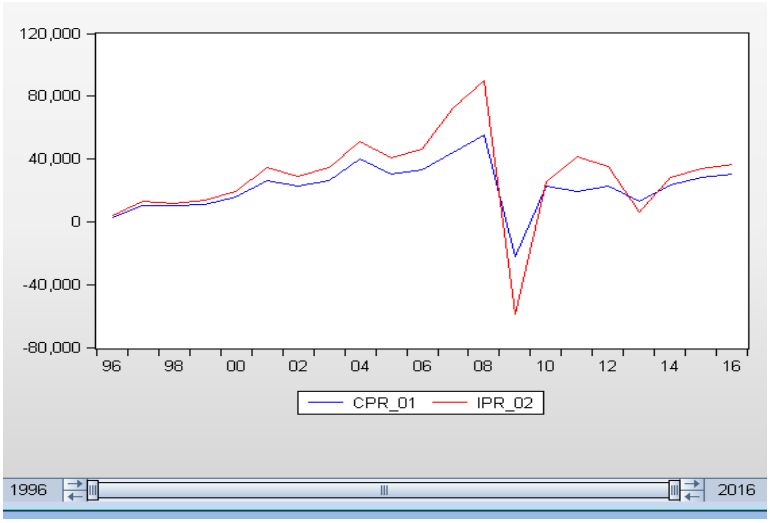
The statistical and econometrical analysis was done using a one-factor linear regression model. The correlations between the two variables of the econometrical model were studied: the independent variable X – final consumption of households (private consumption) - C_{pr} and the dependent variable Y – gross fixed capital formation of non-financial corporations (final investments) - I_{pr}, concerning Romania in 1995-2016 period. Statistical information available in the Romanian Statistical Yearbook and on the EUROSTAT website was used.

Analysis of recorded data series: the independent variable X – final consumption of households (private consumption) and the dependent variable Y – gross fixed capital formation of non-financial corporations (private investment), from the annual values evolution point of view, as shown in figure 3, shows the evolution of the two variables over the analyzed. The direct relationship between consumer price dynamics and revenue dynamics influences the final consumption of households structure.

As can be seen from 1995 to 2008 there was an increasing trend in the evolution of the two variables studied which is justified on the basiss of the economic growth recorded in that period in Romania, and also on the increase of incomes of both employees and pensioners, and other social categories. Between 2008 and 2010, there is a sharp fall in both private consumption and private investment due to decrease in the growth rate of the population's incomes having as cause the

deepening of the economic crisis and the adoption of measures for restoring the budget balance, which reduced the salary rights for the budgetary personnel by 25%. For the 2010 – 2016 period, the concomitant evolution of the two variables shows an socillating tendency in the first part of the interval and a growth trend towards the end of the analyzed period.

Figure 3 – The common kinematics of the two variables for the analyzed period



Source: author's work

The stationarity analysis of the independent variable X, final consumption of households, for recorded values (level values), was done using the correlation and the Dickey-Fuller test. From the correlogram graph (which is, at the same time, decreasing but also oscillating depending on the number of lags taken into account), as seen in figure 4a, it is shown that the series of the independent variable X at the recorded values (level values) is non-stationary. In order to check rigorously the stationary or non-stationary character of the series, the unit root test was done. As seen in figure 4b, the calculated vale of the test, i.e. 0.689 is greater than the tabulated values for all three levels of significance (1%: - 3.78; 5% - 3.01; 10%: - 2.64). Consequently, the time series of the independent variable X for the recorded values (level values) is non-stationary (the null hypothesis is accepted).

Figure 4 – The correlogram (a) the Dickey – Fuller test
(b) for the independent variable X – registered values

Series: CPR Workfile: WF-1::Untitled\

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats

Correlogram of CPR

Date: 10/22/17 Time: 22:01
Sample: 1995 2016
Included observations: 22

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.882	0.882	19.553	0.000
		2	0.760	-0.081	34.791	0.000
		3	0.636	-0.075	46.046	0.000
		4	0.510	-0.090	53.667	0.000
		5	0.375	-0.122	58.026	0.000
		6	0.242	-0.086	59.961	0.000
		7	0.115	-0.082	60.425	0.000
		8	-0.006	-0.083	60.427	0.000
		9	-0.141	-0.190	61.234	0.000
		10	-0.245	-0.006	63.884	0.000
		11	-0.327	-0.032	69.001	0.000
		12	-0.387	-0.033	76.913	0.000

a)

View | Proc | Object | Print | Name | Edit+/- | CellFmt | Grid+/- | Title | Comments+/-

Augmented Dickey-Fuller Unit Root Test on CPR

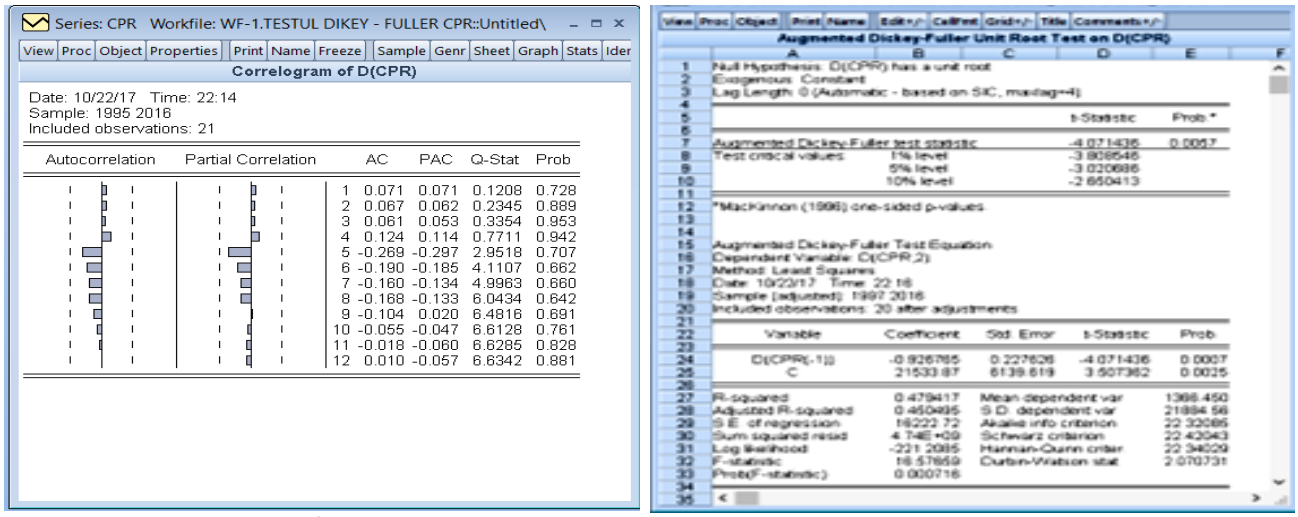
	A	B	C	D	E
1	Null Hypothesis: CPR has a unit root				
2	Exogenous: Constant				
3	Lag Length: 0 (Automatic - based on SIC, maxlag=4)				
4					
5				t-Statistic	Prob.*
6					
7	Augmented Dickey-Fuller test statistic			0.689885	0.9888
8	Test critical values:	1% level		-3.788030	
9		5% level		-3.012363	
10		10% level		-2.646119	
11					
12	*MacKinnon (1996) one-sided p-values.				
13					
14					
15	Augmented Dickey-Fuller Test Equation				
16	Dependent Variable: D(CPR)				
17	Method: Least Squares				
18	Date: 10/22/17 Time: 22:10				
19	Sample (adjusted): 1996 2016				
20	Included observations: 21 after adjustments				
21					
22	Variable	Coefficient	Std. Error	t-Statistic	Prob.
23					
24	CPR(-1)	0.016532	0.023963	0.689885	0.4986
25	C	18779.71	6061.424	3.098234	0.0059
26					
27	R-squared	0.024437	Mean dependent var		22170.00
28	Adjusted R-squared	-0.026908	S.D. dependent var		16046.06
29	S.E. of regression	16260.51	Akaike info criterion		22.32126
30	Sum squared resid	5.02E+09	Schwarz criterion		22.42074
31	Log likelihood	-232.3732	Hannan-Quinn criter.		22.34285
32	F-statistic	0.475941	Durbin-Watson stat		1.846664
33	Prob(F-statistic)	0.498607			
34					

b)

Source: author's work

For values calculated as first-order differences of the independent variable X, from the correlogram graph (which is relatively constant depending on the number of lags taken into account), shows that the series of the independent variable X which is noted as D(X), for the level values calculated as first-order differences, is stationary, as seen in figure 5a. In order to check rigorously the stationary or non-stationary character of the series, the unit root test was done. As observed in figure 5b, the calculated value of the test, i.e. -4.071 is lower than the tabulated values for all three levels of significance: 1%: - 3.80, 5%: -3.02, 10%: -2.65. Consequently, the time series of the independent variable X for the values calculated as first-order differences is stationary (the null hypothesis is rejected) for any of the levels of tabulated significance.

Figure 5 – The correlogram (a) and Dickey – Fuller test (b) for the independent variable D(X) – first-order differences


Series: CPR Workfile: WF-1.TESTUL DIKEY - FULLER CPR::Untitled\
Correlogram of D(CPR)
Date: 10/22/17 Time: 22:14
Sample: 1995 2016
Included observations: 21
Autocorrelation Partial Correlation AC PAC Q-Stat Prob
1 0.071 0.071 0.1208 0.728
2 0.067 0.062 0.2345 0.889
3 0.061 0.053 0.3354 0.953
4 0.124 0.114 0.7711 0.942
5 -0.269 -0.297 2.9518 0.707
6 -0.190 -0.185 4.1107 0.662
7 -0.160 -0.134 4.9963 0.660
8 -0.168 -0.133 6.0434 0.642
9 -0.104 0.020 6.4816 0.691
10 -0.055 -0.047 6.6128 0.761
11 -0.018 -0.060 6.6285 0.828
12 0.010 -0.057 6.6342 0.881
Augmented Dickey-Fuller Unit Root Test on D(CPR)
Null Hypothesis: D(CPR) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=4)
t-Statistic Prob.*
Augmented Dickey-Fuller test statistic -4.071436 0.0007
Test critical values: 1% level -3.808546
5% level -3.020686
10% level -2.650413
*MacKinnon (1996) one-sided p-values.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CPR,2)
Method: Least Squares
Date: 10/22/17 Time: 22:16
Sample (adjusted): 1997 2016
Included observations: 20 after adjustments
Variable Coefficient Std. Error t-Statistic Prob.
D(CPR(-1)) -0.926765 0.227626 -4.071436 0.0007
C 21533.87 6139.619 3.507382 0.0025
R-squared 0.479417 Mean dependent var 1366.450
Adjusted R-squared 0.450495 S.D. dependent var 21884.56
S.E. of regression 16222.72 Akaike info criterion 22.32085
Sum squared resid 4.74E+09 Schwarz criterion 22.42043
Log likelihood -221.2085 Hannan-Quinn criter. 22.34029
F-statistic 16.57859 Durbin-Watson stat 2.070731
Prob(F-statistic) 0.000716

a) b)

Source: author's work

The stationarity analysis for the dependent variable Y, the gross fixed capital formation of non-financial corporations (level values), as seen in figure 6a and, as it can observed from the correlogram graph (decreasing but also oscillating depending on the number of lags taken into account) shows that the series of dependent variable Y at the level of recorded values (level values) is non-stationary. The Dickey – Fuller test verifies the stationary or non-stationary character of the series, and as seen in figure 6b, the calculated values of the test, i.e. 0.389 is greater than the tabulated values for all three levels of significance (1%: -3.78; 5%: -3.01; 10%: -2.64). Consequently, the time series of the independent variable X for the recorded values (level values) is non-stationary (the null hypothesis is accepted).

Figure 6 – The correlogram (a) and the Dickey – Fuller test (b) for the dependent variable Y – recorded values

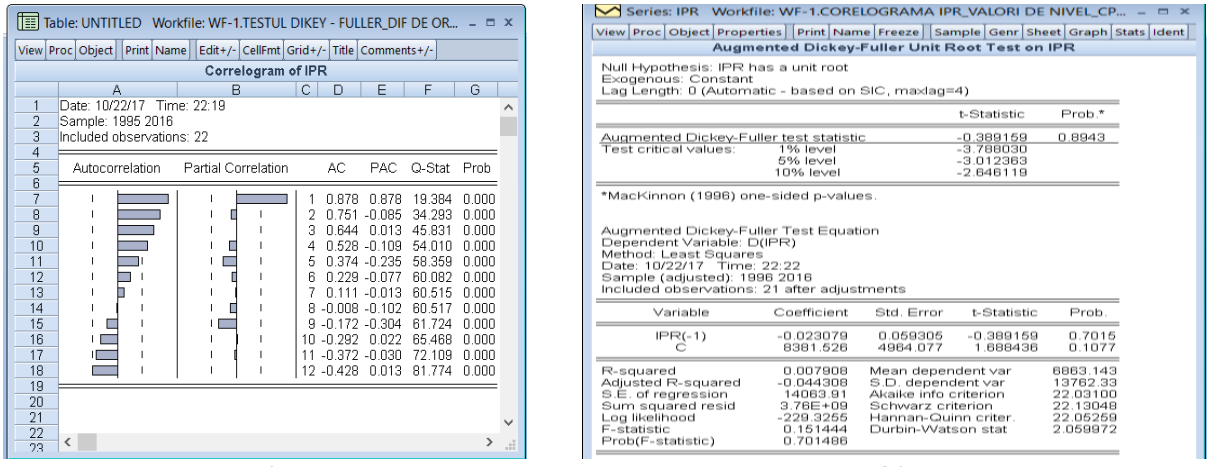


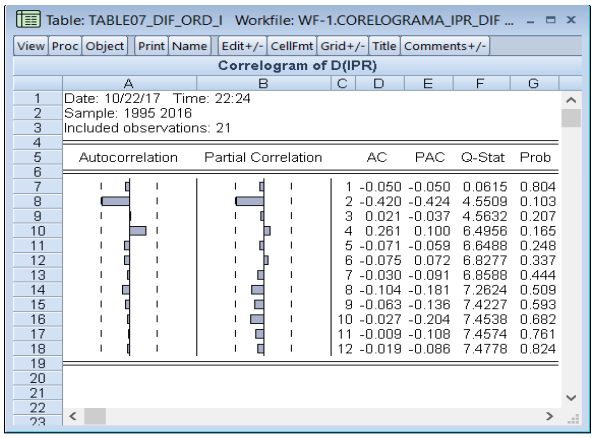
Table: UNTITLED Workfile: WF-1.TESTUL DIKEY - FULLER_DIF DE OR...
Correlogram of IPR
Date: 10/22/17 Time: 22:19
Sample: 1995 2016
Included observations: 22
Autocorrelation Partial Correlation AC PAC Q-Stat Prob
1 0.878 0.878 19.384 0.000
2 0.751 -0.085 34.293 0.000
3 0.644 0.013 45.831 0.000
4 0.528 -0.109 54.010 0.000
5 0.374 -0.235 58.359 0.000
6 0.229 -0.077 60.082 0.000
7 0.111 -0.013 60.515 0.000
8 -0.008 -0.102 60.517 0.000
9 -0.172 -0.304 61.724 0.000
10 -0.292 0.022 65.468 0.000
11 -0.372 -0.030 72.109 0.000
12 -0.428 0.013 81.774 0.000
Series: IPR Workfile: WF-1.CORELOGRAMA IPR_VALORI DE NIVEL_CP...
Augmented Dickey-Fuller Unit Root Test on IPR
Null Hypothesis: IPR has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=4)
t-Statistic Prob.*
Augmented Dickey-Fuller test statistic -0.389159 0.8943
Test critical values: 1% level -3.788030
5% level -3.012363
10% level -2.646119
*MacKinnon (1996) one-sided p-values.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(IPR)
Method: Least Squares
Date: 10/22/17 Time: 22:22
Sample (adjusted): 1996 2016
Included observations: 21 after adjustments
Variable Coefficient Std. Error t-Statistic Prob.
IPR(-1) -0.023079 0.059305 -0.389159 0.7015
C 8381.526 4964.077 1.688436 0.1077
R-squared 0.007908 Mean dependent var 6863.143
Adjusted R-squared -0.044308 S.D. dependent var 13762.33
S.E. of regression 14083.91 Akaike info criterion 22.03100
Sum squared resid 3.76E+09 Schwarz criterion 22.13048
Log likelihood -229.3255 Hannan-Quinn criter. 22.05259
F-statistic 0.151444 Durbin-Watson stat 2.059972
Prob(F-statistic) 0.701488

a) b)

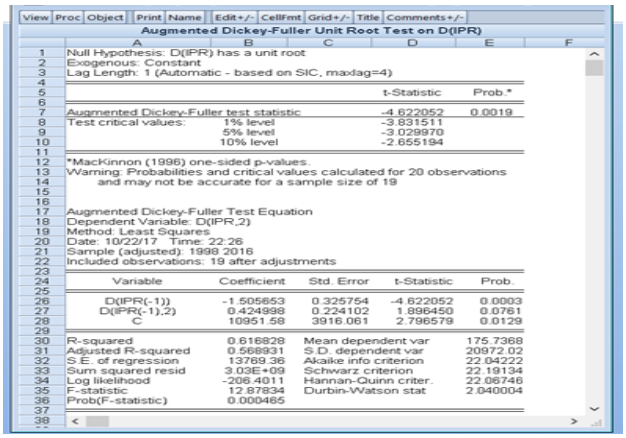
Source: author's work

The stationarity of the dependent variable Y, which is noted D(Y), at the level values calculated as first-order differences, is shown in the correlogram graph (which is relatively constant depending on the number of lags taken into account) from the figure 7a, and it shows that the variable series D(Y) is stationary. The results of the Dickey – Fuller test (which verifies the stationary or non-stationary character of the series) shows that the calculated value of the test, i.e. -4.622 is lower than the tabulated values for all three levels of significance 1%: - 3.83; 5%: - 3.02; 10%: - 2.65. Consequently, the time series of the variable D(Y) for the values calculated as first-order differences is stationary (the null hypothesis is rejected) for any of the levels of tabulated significance (figure 7b).

Figure 7 – The correlogram (a) and the Dickey – Fuller test (b) for the dependent variable D(Y) – first-order differences



a)

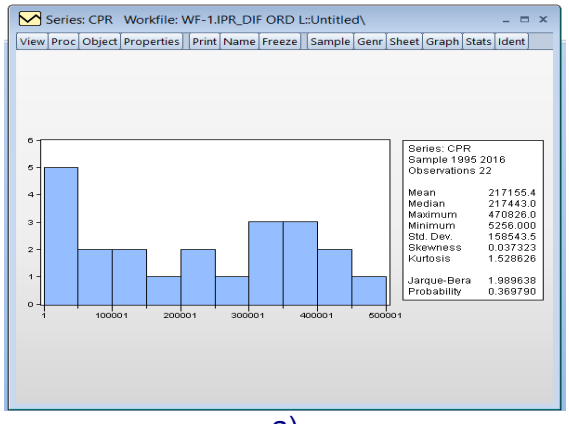

Augmented Dickey-Fuller Unit Root Test on D(IPR)
Null Hypothesis: D(IPR) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=4)
t-Statistic Prob.*
Augmented Dickey-Fuller test statistic -4.622052 0.0019
Test critical values: 1% level -3.831511
5% level -3.029970
10% level -2.655194
*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 19
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(IPR,2)
Method: Least Squares
Date: 10/22/17 Time: 22:26
Sample (adjusted): 1998 2016
Included observations: 19 after adjustments
Variable Coefficient Std. Error t-Statistic Prob.
D(IPR(-1)) -1.505853 0.325754 -4.622052 0.0003
D(IPR(-1),2) 0.424998 0.224102 1.896450 0.0761
C 10951.58 3916.061 2.796579 0.0129
R-squared 0.616828 Mean dependent var 175.7368
Adjusted R-squared 0.568931 S.D. dependent var 20972.02
S.E. of regression 13769.36 Akaike info criterion 22.04222
Sum squared resid 3.03E+09 Schwarz criterion 22.19134
Log likelihood -206.4011 Hannan-Quinn criter. 22.06746
F-statistic 12.87834 Durbin-Watson stat 2.040004
Prob(F-statistic) 0.000465

b)

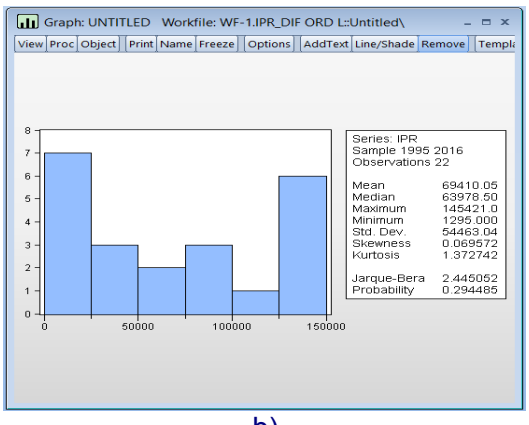
Source: author's work

The histograms of the two variables analyzed, for values calculated as first-order differences, as seen in figure 8, show that for the variable D(X), in terms of statistical distribution of the series, from the value of the Skewness indicator, thus the coefficient of asymmetry (0.04), there is a relatively close distribution of the normal distribution. As for the value of the indicator showing the flattening of the distribution, i.e. Kurtosis: 1.52 the value less than 3 shows a platykurtic distribution. The value of the Jarque – Bera test: 1.98 (which indicates, by comparing the difference between the coefficient of asymmetry and the flattening coefficient against the normal distribution, the degree of normality of the distribution) has a null probability associated, so the hypothesis of the normal distribution of the time series of the variable D(X) is rejected. The histogram of the variable D(Y) shown in figure 8b shows a distribution close to the normal distribution, the coefficient of asymmetry (Skewness) is 0.006, the Kurtosis indicator has a value less than 3, which shows us that the analyzed series has a platykurtic distribution, the value of the Jarque – Bera test of 2.44 is associated with a probability of zero, therefore, the hypothesis of the normality of the distribution of variable D(Y) time series.

Figure 8 – The histograms of the two variables – first-order differences



a)

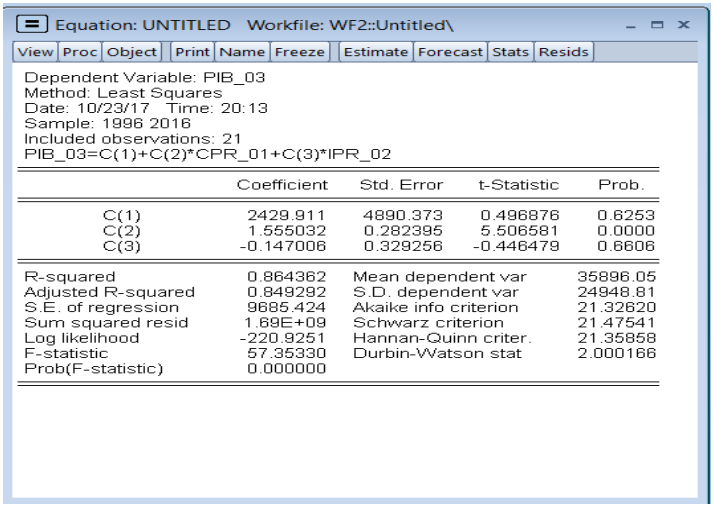


b)

Source: author's work

The parameters of the single-factor regression equation as seen in figure 9 were estimated.

Figure 9 – The estimation of regression equation parameters



Equation: UNTITLED Workfile: WF2::Untitled\

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: PIB_03
Method: Least Squares
Date: 10/23/17 Time: 20:13
Sample: 1996 2016
Included observations: 21
PIB_03=C(1)+C(2)*CPR_01+C(3)*IPR_02

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	2429.911	4890.373	0.496876	0.6253
C(2)	1.555032	0.282395	5.506581	0.0000
C(3)	-0.147006	0.329256	-0.446479	0.6606

R-squared	0.864362	Mean dependent var	35896.05
Adjusted R-squared	0.849292	S.D. dependent var	24948.81
S.E. of regression	9685.424	Akaike info criterion	21.32620
Sum squared resid	1.69E+09	Schwarz criterion	21.47541
Log likelihood	-220.9251	Hannan-Quinn criter.	21.35858
F-statistic	57.35330	Durbin-Watson stat	2.000166
Prob(F-statistic)	0.000000		

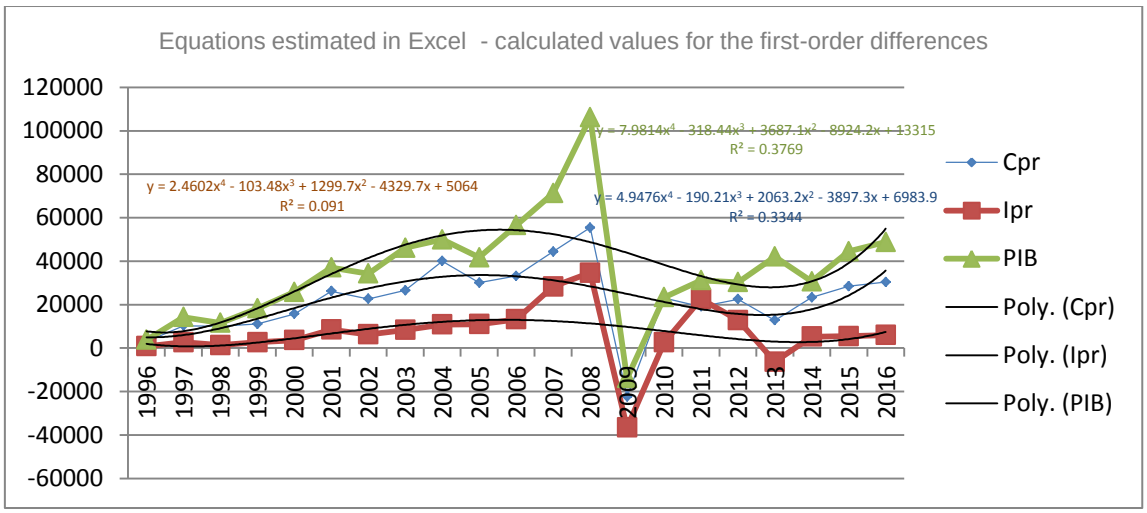
Source: author's work

The linear relation between the two variables analyzed has the expression:

$$dY = 2429.9 + 1.56 \cdot dCpr - 0.15 \cdot dIpr \quad (7)$$

Figure 10 shows the evolution of the variables for the analyzed period, processed using Excel.

Figure 10 – The estimation of regression equation for values calculated as first-order differences



Source: author's work

Results Obtained

The GDP variation is directly proportional to the variation of the variable C_{pr} – final consumption of households (private consumption) and inversely proportional to variation of the variable I_{pr} – gross fixed capital formation of non-financial corporations (private investment).

The equation requires an interpretation inconsistent with the economic theory that says gross domestic product, or its variation adds the variation of private consumption to the variation of private investment.

Since the variable of private investment is negative, we can assume that private investment in the current year is equivalent to a cash extraction from consumption, as the investment effect will manifest itself in the future.

Conclusions

Following the econometrical modeling of the two series of data, the free term of the estimated equation is very high, thus 2429.9, does not depend on either the independent variable X or the dependent variable Y, which means that the first-order difference over GDP has a high degree of independence from the independent variables taken into account. This means that there are other casual factors on the absolute GDP dynamics and that in GDP dynamics a certain autonomous inertia must be accepted, due to the fact that the GDP is monetarily equal to its distribution. In fact, this result was expected because in the analysis only the fiscal variables (as the IS curve shapes the fiscal policy) were taken as independent variables.

The dependence of absolute GDP variation on final private consumption variation is positive and over-unitary, thus 1.56. This means (from the perspective of the partial output of private final consumption in relation to GDP) a marginal propensity towards over-consumption, which can only be explained by the fact that income affected to consumption also comes from sources other than labor income or capital gains (example: could come from consumer credit).

The dependence of absolute GDP variation on the absolute variation of private investment is negative and sub unitary, thus -0.15. This means that the withdrawal of the money supply from the available private investment has a short-term contraction effect on GDP, with the compensatory effect of investments appearing with a certain lag (in this study, but this effect was not taken into account).

Future Directions to Be Approached

In this context, we propose that, in a research development, we should examine by econometrical means the existence of lags in the impact of private invesment on GDP.

A study will also be developed on a possible indifference curve for the absolute GDP change in which the independent variables in this study will be included in a marginal substitution rate. Thus, by calculating the total differential of the equation (7) it can be obtained (be noted):

$$d(dY) = \alpha \cdot dC_{pr} + \beta \cdot dI_{pr} = 0 \quad (8)$$

where:

$\alpha = 1.56, \beta = -0.15$

From the relation (8), it can be obtained:

$$\alpha \cdot dC_{pr} = -\beta \cdot dI_{pr} \quad (9)$$

$$R_{ms} = \frac{dC_{pr}}{dI_{pr}} = -\frac{\beta}{\alpha} \quad (10)$$

where:

R_{ms} – the marginal substitution rate

An important economic indicator for adopting consumer decisions, the marginal substitution rate, is also an important tool for analyzing the variation of the two independent variables studied in this paper.

Bibliography

Brooks, C. (2014), Introductory Econometrics for Finance, 3 rd Edition, Cambridge University Press.

Dinga, E. (2011), Economics II - Macroeconomics, Cours notes, p.111 – 113.

Dinga, E., (2011), Economic sustainability through adjustment policies in the context of globalization, Romanian Academy Publishing House, Bucharest.

Jula D., Jula N. (2017) Economic modeling. Econometric and optimization models, Mustang Publishing House, Bucharest.

THE EVALUATION OF EFFECTIVE USE OF BUDGET FUNDS

Victoria POSTOLACHE [37], PhD

Abstract

Improving the efficiency of budget expenditures is one of the most important tasks facing government bodies and local self-government. The concept of public financial policy, focused on the transition from cost management to results management, defines a new approach to assessing the effectiveness of using budget funds. When assessing the effectiveness of the use of public funds and developing methods for measuring and formulating performance criteria, one should take into account not only the economic component linking the volumes of the budget service with the costs of providing it, but also various other components of efficiency.

Keywords: public expenditure, financial control, budget, public revenue, efficiency

JEL Classification: H61, H71, H83

Introduction

In recent years, governments have faced not only unprecedented fiscal stress but also the pressure of the community to cut costs, so considerable budget cuts have been a must for most governments. Many governments have realized that their traditional budgeting process does not help managers make the necessary decisions to reduce costs to the required levels. The State Financial Policy Concept, geared to the shift from spending management to outcome management, defines a new approach to assessing the effectiveness of the use of budget funds. This is a more complex issue for the public sector than for the private sector, because, in addition to economic efficiency, it is necessary to evaluate the many social, scientific, environmental and other components of public spending efficiency.

Description of the Problem

In the context of the MFP reform at the international level, the Republic of Moldova stated the intention to modernize the public finance management by adopting / approving the necessary normative framework and by initiating some activities of reforming some elements of the system in question. The normative framework was supplemented by provisions for reforming public finance management, in particular, introducing innovative elements that were previously lacking. The most important new elements refer to the medium-term budgetary framework (originally used was the term medium-term expenditure framework), the internal financial audit of public authorities and the Law on Public Finances and Budget-Tax Responsibility, which introduced key changes in budgetary process and provides for the substantiation and reporting of budgets on performance-based programs, the allocation and use of budgetary resources in an economical, efficient and effective way, in line with the principles of good governance. The aforementioned law defines performance as "the result of the activity of the budgetary authorities/institutions as a result of the implementation of the programs, expressed as a social-economic or other impact, as a volume of services rendered or as an efficiency of using the budgetary resources". Thus, the law provides that performance is defined as a result, as a volume of services and as efficiency, respectively measured by result, product and efficiency performance indicators on subprograms (rather than programs).

In order to ensure the implementation of the aforementioned law and to improve the management of the use of public funds, in 2013, the Public Finance Management Development Strategy for 2013-2020, structured on the most important areas of public finance management, was approved identified the issues in the field and outlined the directions and actions for their resolution and improvement of the situation in the field. Although a number of important changes have been made in the Republic of Moldova in the field of MFP over the past years, the harmonization of the budgeting process with the best practices of the developed countries is still under way.

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In the context of the Moldovan budget reform, the need to develop a modern financial control system, changes in the target orientation of cost-to-performance control, becomes the development of a methodology for assessing the effectiveness of the use of budget funds. When conducting financial control, the assessment of the effectiveness of the use of public money must be seen as a process or set of actions that improve financial relations, budget balance, improving the quality of life of the population and, on the other hand, as a system which includes government bodies implementing financial programs and policies based on the principles of efficient and responsible public finance management.

Many times, public managers have been too interested in the outcome and little in the way it is touched. Countless cases can be given as examples of public funds in a totally unjustified, most such examples being found in investments in infrastructure and acquisitions of goods. Organizations become solely concerned with the supply of public goods and services, without taking into account the waste of the processes. Therefore, in achieving public sector goals and outcomes, efficiency and economy must take precedence. Thus, performance in the public sector can be viewed from the point of view of allowing an overview of efficiency and effectiveness to be observed, and not just one or the other. Ignoring effectiveness in terms of effectiveness can have negative economic and social consequences and is even more dangerous in the public system.

Due to the nature of the public sector (the multiplicity and diversity of stakeholders and differences in values and perceptions about their performance, the lack of a competitive environment in which they are offered some services because of monopoly position for some services that have some public services or administrative authorities), performance measurement is generally a complex and difficult process, especially when it comes to the public sector.

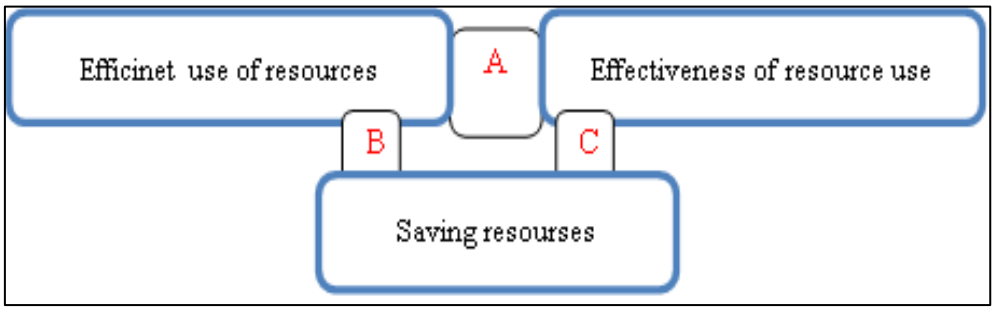
Methodology and Data Sources

Economic efficiency characterizing the expenses regarding efficient use of budgetary funds, assuming that budget funds are used for their intended purpose, there is no wasteful use of surplus resources, exceeding minimum standards etc. The efficiency of resource utilization is manifested by increasing labor productivity, increasing the level of funds and material production, accelerating the speed of rotation of funds.

Resource efficiency indicators are the same for all segments of the financial system and the national economy sectors. Effectiveness of budget expenditures characterizes compliance spending and the results obtained with their specific objectives are determined by state bodies and local self-government in accordance with programs and projects developed.

Of particular importance, as the transition to results-based budgeting, a gain evaluating the effectiveness of budget expenditures, while improving resource efficiency and effectiveness are the prerequisites for attaining the defined plans and government programs (Figure 1).

Figure 1 - Correlation of efficiency indicators for the use of budget funds [38]



Source: author's work

[38] *A - the link between efficiency and effectiveness with the goals and objectives of financial policy, compared to which the outcome of the use of budget funds is assessed; B - the link between efficiency and economy: the condition of efficiency - minimizing the costs to achieve the planned outcome, ie, the economy; C - the link between efficiency and economy: minimizing spending to achieve the goal.*

The assessment of the effectiveness of the use of budget funds is based on the application of an integrated approach and involves the use of a system of indicators, which includes:

- absolute indicators that characterize the achievement of planned targets or planned outcomes in terms of both natural and value indicators (births, deaths, unemployed, rich and poor, number of offenses, consumer basket price, etc.);

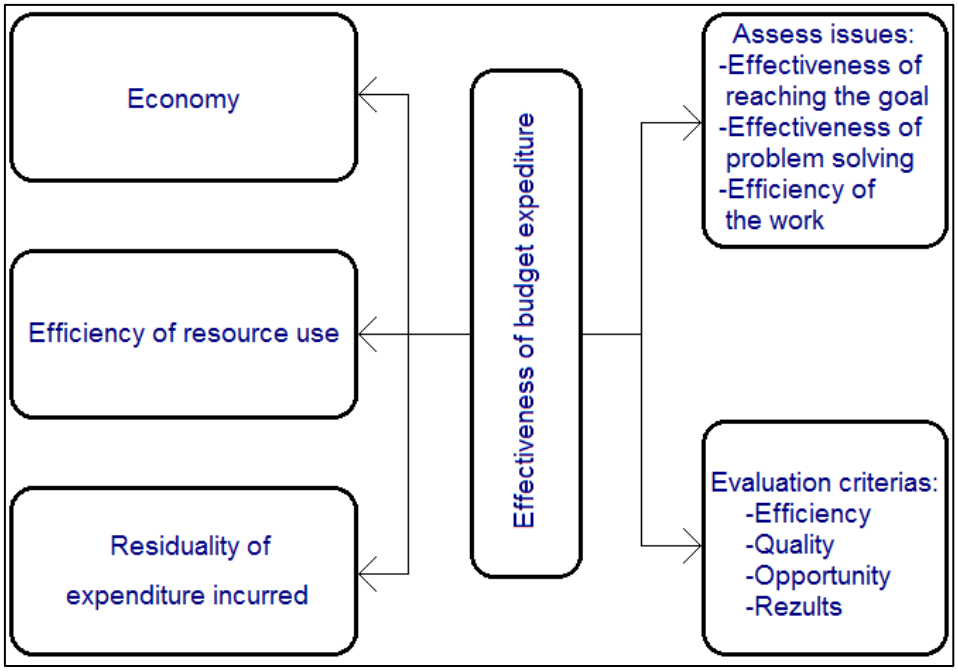
- quality indicators that reflect the quality of the operation of the object or management system when using budget funds (the level of pension insurance, the degree of housing insurance, social benefits, etc.);

- relative indicators that reflect the "cost" of performance in terms of costs per unit of production or services (volume of social services per unit of investment, increase in births or decrease in unit mortality of invested funds, reduction of morbidity per unit of investment, etc.);

- dynamic indicators that characterize the change in indicators previously characterized in time, i.e. growth or decreasing rates (birth rate, actual salaries, pensions, etc.).

The specific structure of the indicators of the effectiveness of budget expenditures, their aspects and evaluation criteria is presented in Figure 2.

Figure 2 - Directions for assessing the efficiency of budget expenditures



Source: author's work

An integrated approach to assessing the efficiency of the use of budget funds should be based on the principles outlined in table no. 1.

Financial performance analysis can be important from a double perspective: both to substantiate internal fiscal (revenue) and expenditure policy policies and to determine the level of local authority investment.

Concerns expressed at the different levels of decision-making have determined the outlining of several dimensions of performance. In OECD countries, performance can be assessed using several general categories of measurement:

a. Measurement of the resource economy, defined as obtaining adequate quality resources, with lower costs than predicted. All relevant costs must be included in this assessment. A measure of resource economy may be the ratio between input or resource acquisition prices and the expected value, scheduled or approved as an objective;

b. Measurement of costs and means: means the measurement in monetary terms of the consumption of resources made to provide a certain volume of services;

c. Measuring efficiency: Takes into account the relationship between the result obtained and the means used to obtain it. A process is effective if it achieves the maximum of possible outcomes at a given amount of resources or if it uses the minimum of resources at a given volume of results;

d. Measurement of effectiveness: it considers the ability of an activity to produce the expected result. Its quantification is given by the ratio between the result obtained and the target set at the start of a program. This requires the objective to be defined in advance, and the result obtained can be measured by means of an indicator. Efficiency is the most important element of the value-for-money ratio. Goods or services can be provided in an economical or efficient manner, but if they do not achieve the expected outcome, we can say that the resources used will be largely scattered;

e. Measuring service quality: follows the degree to which the product or service responds to the needs of consumers. In this sense, quality includes the effectiveness of a program;

f. Measuring financial performance: it is mainly pursued by public services of an economic nature;

g. Measuring global performance: Considering the dimensions of performance, globally approached.

Table 1

Principles for the evaluation of performance indicators of public finance management and the efficiency of the use of budget funds

Principles	Content
Scientifically	Applying the scientific methods of knowledge, the use of new methods, indicators reflecting the effectiveness of budgetary and administrative reforms, developing new methods and techniques based on the best practices in public finance management
Systematic	It manifests itself in interdependent and dynamic relations of development of the quality of public finance management and improvement of the social and economic situation of the state, region, municipality
Independence	Non-application by any state authorities, local self-government bodies and officials of methods of voluntary and material influence
Advertisement	The results of assessing the efficiency of the work of the authorities, the effectiveness of budgetary funds should be communicated to the public
Effectiveness	The results of the evaluation should be applied in practice to improve the quality of public finance management and the efficiency of budgetary funds
Economy	All the means invested in assessing the effectiveness and quality of public finance management should deliver. When the planned result is achieved, the emphasis is on minimizing costs
Efficiency	Timely monitoring of the state of public finances will enable rapid action to be taken to achieve the established objective
Objectivity	Using reliable sources of information on the state of public finances, the level of socio-economic development, the effectiveness of government bodies and local government
Statehood	The search for ways to improve the state of public finances involves a mix of state and public interests (public interests are related to the quality and volume of budget services, state interests are related to the efficiency of budget expenditures)
Complexity	A comprehensive study on the effectiveness, quality of public finance management, the effectiveness of budgetary funds, an analysis of all the factors affecting them (internally and externally)
Regularity	The assessment of effectiveness, quality of public finance management, efficiency of budget funds should be made with a clear periodicity
Comparability	The results of quality assessment, the efficiency of public finance management and the effectiveness of budget funds should be comparable in dynamics and territories

The evaluation activity is closely correlated with the monitoring process, as the data obtained from this process is one of the sources of information used in the evaluation. However, the evaluation

examines much more than the extent to which the financial and physical progress achieved at some point in the implementation of the program is in line with the initial planning. In order for the evaluation activity to respond to the goals pursued by this complex process, at the level of the European Union, 5 criteria were used in any evaluation exercise - the "DAC" criteria, these are described in table no. 2.[39].

Table 2

The conceptual essence of the "DAC"

Criteria	Description
Relevance	The relevance of a project is the extent to which the objectives set and the proposed implementation plan address correctly the identified problems. Changes in the nature of the problems initially identified or certain circumstances in which the implementation of the project takes place, whether physical, economic, institutional or political, may make the project irrelevant to the problems / needs it was intended to address.
Efficiency	The efficiency criterion refers to how well the available resources were used to transform the proposed activities into the intended results. This criterion addresses profitability issues, namely whether better results could have been achieved in other ways and at the same time cheaper.
Effectiveness	The Efficiency Criterion tries to identify whether the project has reached the objectives set in the programming phase. The key question is what benefit the project has brought into practice, by reference to the extent to which the subjects concerned actually benefited from the products or services that the project made available to them.
Impact	Impact term refers to the overall effect of benefits of a particular project on a larger number of people than the main beneficiaries in a particular sector, a particular region or even across the country.
Sustainability	The sustainability criterion shows whether the positive outcomes of the project are likely to continue after the end of the external financing period and also whether the long-term impact of the program on the wider development process can be maintained at sector, region or country level.

These evaluation criteria are not necessarily reviewed in any evaluation, but are tailored to the timing of the evaluation, the status of the program implementation and the objectives of the evaluation.

To test the effectiveness of public spending, traditional methods of economic statistics and mathematical and statistical methods of linking such as: index method, regression analysis, packet data analysis (table 3) are widely used.

Table 3

Methods of measuring the effectiveness of public expenditure

Method	The essence of the method	Shortcomings
Analysis of indices	Comparing the organization's performance with previous-period indicators and similar organization indicators	The presence of restrictions: it is impossible to take into account objective factors that have influenced the outcome of management. The method is useful in terms of industrial financial structure
Regression analysis	Efficiency is assessed on the basis of an analysis of the deviations of the mean of the effective factor indicator	It requires continuous monitoring of the main and explanatory data generated within the organization
Analysis of data packets	Focuses on maximum performance or efficiency. Activities are recognized as inefficient if the pointer is below the "advanced"	Artificialness in determining the maximum possible level

[39] The criteria were first described in a document of the OECD Development Aid Committee (1991), entitled "DAC Principles for the Assessment of Development Assistance"

The choice of the method depends on the objectives set by the state or local government, the state financial control body, independent experts, and so on.

Because public sector efficiency is accomplished through the Pareto chart, the set of tools for assessing the effectiveness of budget expenditures should include decision theory, game theory, situational analysis, simulation modeling, and so on.
Modern instruments for assessing the efficiency of budget expenditure should include methods of analyzing and modeling factors, which will allow for an increase in the number of factors the management of which will allow authorities to increase the efficiency of budgetary spending.

To assess the effectiveness of budget spending, we will use 3 key indicators:

1) direct result (direct) (budget service and its volume);

2) the cost of providing a budget service;

3) the final social result that can measure the quality of the budget service.

Estimating the effectiveness of budget expenditures in this case will be based on the calculation of the following indicators:

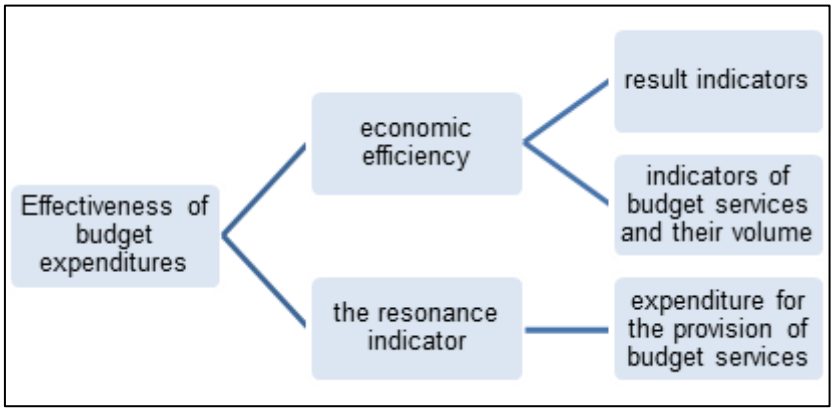
- economic efficiency (the ratio between the budget service indicator and the cost of providing it);

- efficiency (ratio of final result to budget service);

- the effectiveness of budget expenditure (the ratio between the final result and the cost of providing a budget service).

The relationship between these indicators can be demonstrated using a multiplier model with two factors. The data in Figure 3 helps us identify ways to improve the efficiency of budget spending.

Figure 3 - Scheme of modeling the efficiency factor of budget expenditures


Effectiveness of budget expenditures
economic efficiency
the resonance indicator
result indicators
indicators of budget services and their volume
expenditure for the provision of budget services

Source: elaborated by author

Good management of public expenditures implies the use of taxpayers' money to achieve priority objectives that society (through its elected representatives) finds useful and desirable. Good management also implies achieving these stated objectives in an efficient, effective and economic way, as well as the fact that the system of control and balance of power provides adequate democratic accountability and effective governance.

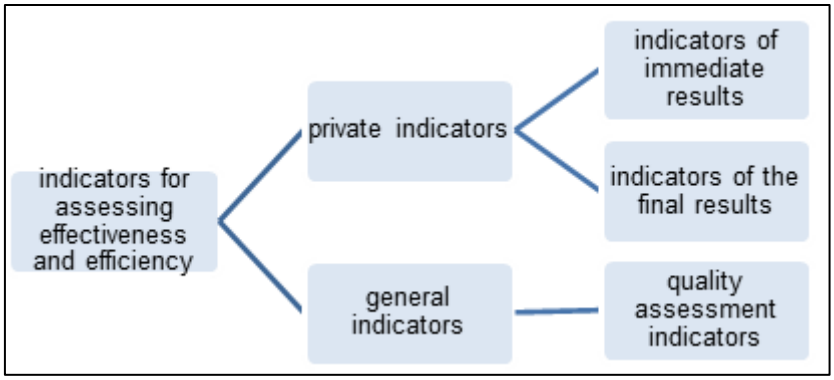
In our opinion, the system of indicators for the evaluation of efficiency and effectiveness can be divided into general and private indicators, shown in figure 4.

The general indicators are applicable to all spending areas of the budgetary funds in all public institutions of the Republic of Moldova and municipalities and must include indicators of the quality of budgetary expenditure management:

- indicators of the quality of the planning (the ratio of the planned and the current indicators, the quality of the medium-term planning, etc.);
- indicators for assessing the structure of the budget (debt burden, weight of wages, etc.);
- indicators for assessing the quality of budget execution (creditor and receivables, energy consumption limits, etc.);

- indicators of quality control and analytical work and subsequent application of planning results (population surveys, budget audit, inappropriate use of funds, etc.)

Figure 4 - The system of indicators for assessing the efficiency and effectiveness of budget expenditures



Source: elaborated by author

Individual indicators of efficiency and effectiveness, developed for each direction of budget expenditures - education, health, agriculture, etc., which in turn are divided into:

- Indicators of the immediate results - Characterization of the volume and quality of state (municipal) services provided by the executive authorities;
- indicators of final results - characterization of socially significant outcomes for external consumers (population) from the provision of state (municipal) services.

This approach will link the cost of the expected return on these costs to their economic and social efficiency in order to ensure the relationship between budget expenditures and the results achieved, as well as the establishment of a system of indicators for the different budget planning disciplines and the providers of budget services, which allows to quantify the assessment of the degree of fulfillment of the objectives and objectives of the socio-economic policy.

An important role in the process of assessing the effectiveness of the use of budgetary funds is given to non-formalized methods. Assessing the effectiveness of government programs and budget spending implies, for example, the widespread use of a comparison technique. The basis for comparison can be:

- the normative value of the indicators, the realization of which indicates the efficiency of the use of the budgetary funds;
- similar indicators of past periods obtained in neighboring regions, similar processes and foreign practices.

The necessary condition for the use of the comparison technique is to ensure data comparability, which is very important for social spending, when the result of an activity can be expressed in natural values. It should be noted that, in the budgetary sphere, a significant part of the effects of programs and projects financed from the budget is not intended to obtain financial benefits but is of a social nature. The value of these effects can only be determined by expert methods, which lead to the widespread application of non-formalized assessment methods. In all cases, an evaluation score and expert opinions can be used as a basis for evaluating the effectiveness. Thus, heuristic methods become an essential tool for assessing the effectiveness of budget funds.

By comparing the effectiveness of different projects and programs to selecting one of the possible managerial decisions or to solving the problem of financing a number of projects and programs in the context of limited budget resources for their full implementation, then a formalized assessment compared to the expert is preferable.

Thus, the analysis of the existing practice of assessing the effectiveness of the use of budgetary funds has highlighted the fact that it is based on analytical tools and combines formalized and non-formalized methods. The quality of public finance management is determined by the extent to which it directs public finances towards achieving social and economic objectives in line with the needs of society and the economy. It is characterized by the quality of the management processes: the scientific nature of the management methods used, the progressive means of management.

Increasing the efficiency and effectiveness of public spending not only has a major influence on the maintenance of fiscal discipline, but also reduces budget constraints and allows for the same results with lower budget expenditures.

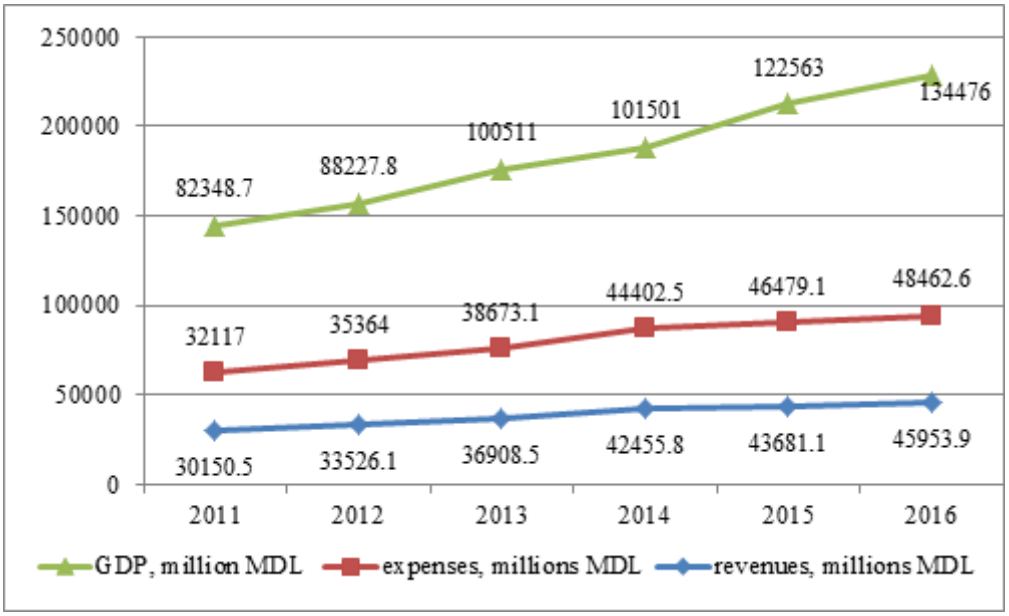
Financial performance assessment is performed using the financial performance indicators grouped into four relevant categories:

1. Indicators of revenue showing the appropriate level of tax (and non-fiscal) revenue of government.
2. Indicators of expenditure, reflecting the flexibility of authorities in allocating resources for different purposes. Some categories of expenditure are less flexible (e.g. operational expenditure), others - more flexible (e.g. capital expenditure can be postponed if budget resources are insufficient), according to legal provisions.
3. Indicators of investment capacity, debt contracting and its structure, which define the long-term financing ability of investments. This category of indicators provides information on the financial solvency of the public administration. In this context, the share of debt service financing costs (representing repayment and debt payments) as a percentage of total expenditure is analyzed.
4. Operational result (surplus / deficit) indicators, which relate to the relationship between revenue and expenditure and reflect the ability to implement a performing financial management. This category of indicators includes the gross operating result (which represents the difference between the operational and operating expenses, the gross operating result in the total operational revenues (which represents the ratio between the gross operational result and the operational revenues). The total revenues of the administration must cover the operational, capital and annual debt service.

Results Obtained

To assess the efficient use of budgetary resources, we will analyze the evolution of revenues and expenditures for the national public budget in correlation with the GDP dynamics for the period 2011 - 2016, using the data from the budget execution reports submitted by the Government and approved by the Parliament.

Figure 5 - Variation of public finance indicators

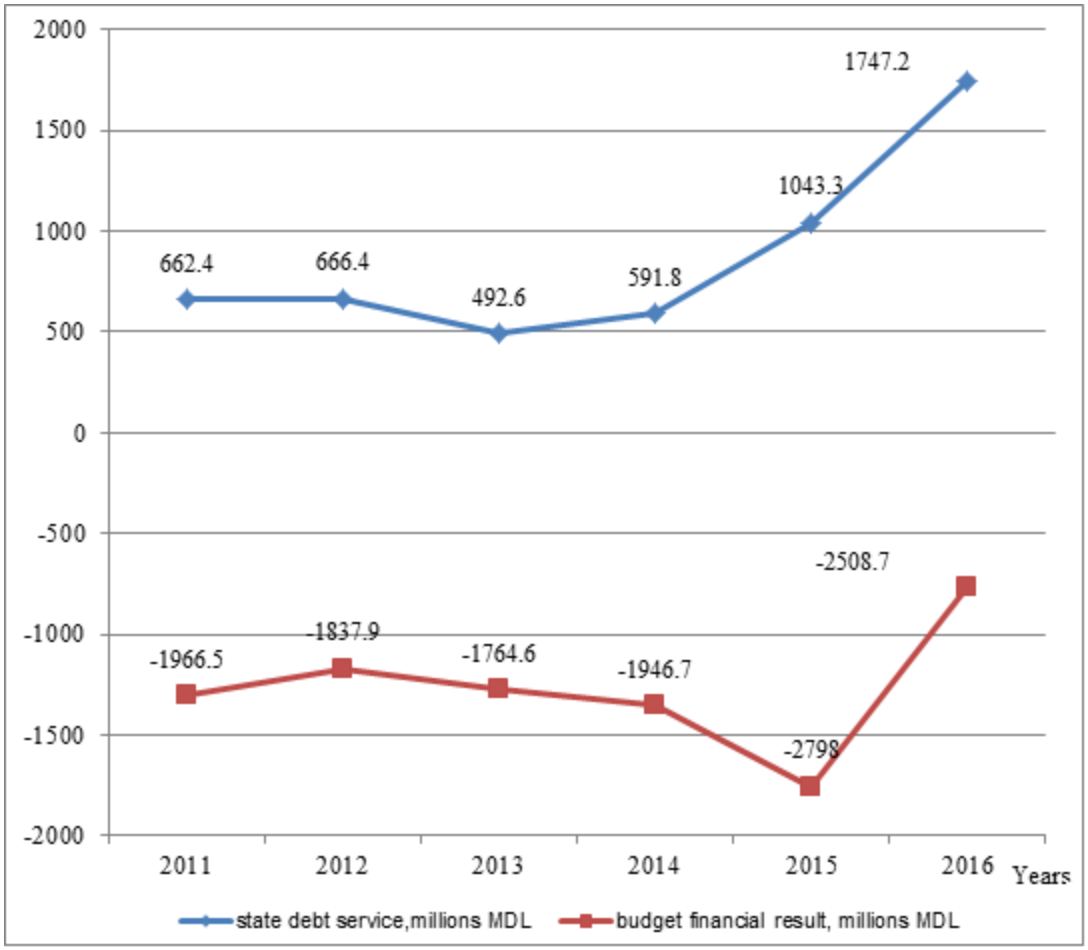


Source: elaborated by author based on http://mf.gov.md/ro/content/raport-privind-executarea-bugetului-de-stat-pe-anul-2016

According to the data presented in Figure 5, we observe an increase of all analyzed elements, which suggests that there is a direct link between the increase of national public budget revenues and GDP growth. At the same time, we note that the growth rate of national public budget expenditures is lower than the growth rate of public revenues (104% <105%), which can be

positively appreciated given the negative financial result at the end of the analyzed period, presented in figure 6.

Figure 6 - Variation of budget financial result and state debt service



Source: elaborated by author based on http://mf.gov.md/ro/content/raport-privind-executarea-bugetului-de-stat-pe-anul-2016

The budget financial result for the investigated years is negative and indicates decreasing values in the years 2011 - 2013 from -1966.5 million lei to -1746 million lei, after which we are witnessing a considerable increase towards the end of 2015 to -2798 million lei or by 1033.2 million lei more than in 2013. For the year 2016 the situation improved slightly, as the decrease of the budget financial result constituted only 289.3 million lei in the conditions of the increase of the state debt service, the values of which are indicated in Figure 6.

The changes in the dynamics of the state debt service are negative, since it increased from 492.6 million lei for the year 2013, a minimum value for the entire analyzed period, to the maximum value of 1747.2 million lei in 2016. This evolution has a negative effect on the budget financial result, which also increased in the investigated years.

Conclusions

So, as a result, the authorities can:

1) to increase economic efficiency while maintaining efficiency, reducing the cost of delivering budget services without damaging the quality of the service and the end result;

2) increasing efficiency, while maintaining economic efficiency, improving service quality without increasing the cost of providing it.

Thus, it can be assumed that as a measure of the efficiency of the use of state budget funds, the results of the activity can be used or taken into account, taking into account that the criteria and the performance indicators of this activity are established, including by the control bodies . The criteria

are reasonable and achievable quality and control standards, based on which it is possible to perform comparative analyzes and evaluate the efficiency of program implementation, economic operations, etc.

Future Directions to Be Approached

Currently, local authorities face two major challenges in different ways: the phenomena of globalization and decentralization. Globalization leads to an increase in the number of interactions between communities, but it can be said that they are selectively operating, and most of those involved in such interactions are those who are part of wider networks. These networks tend to act separately from the rest of the community, being the subject of frequent restructuring and transformation. To become competitive, communities need to connect to these networks and become able to exploit the benefits of globalization. The second phenomenon, decentralization, is a way of responding to the complexity and diversity of the needs of local communities and the demands of citizens or other types of clients of the administration, the aim being the closest and appropriate response to these demands, to ensure maximum efficiency of budget funds.

Bibliography

Ciubotaru M., Hîncu V. (2008), “Financial Management in the Public Management System in the Contemporary Economy”. Economic Studies, 2008, Year II, no. 1-2. Kishinev: ULIM, 2008, p. 271-287.

Oleinik A. (2006) “Administrative reform: failure to score on the quality of power”. http://www. vedomosti. ru/newspaper. article. shtml72006/ll/29/116666.

Profiroiu, A., Profiroiu, M. (2007), “Public Sector Performance Analysis Framework", Theoretical and Applied Economics, no. 1, pp. 41-50.

Siclovan Gh. (1974), “Economic efficiency”. Bucharest: Academiy Publishing House, 211 p.

* * *, Budgeting on programs in the Ministry of Economy, Ministry of Agriculture and Food Industry. Chisinau: Expert-Grup Independent Analytical Center, 2013 http://expertgrup.org.

* * *, Gazette of the Republic of Moldova, 08.08.2014, no.223-230/519.

* * *, Government Decision on the approval of the Public Finance Management Development Strategy for 2013-2020. No. 573 din 06.08.2013 In: Official Gazette of the Republic of Moldova, 09.08.2013, no.173-176/669.

* * *, Guide to Financial Performance Indicators. www.falr.ro

* * *, Law on Public Finances and Budget-Tax Responsibility. No. 181 of 25 July 2014. In: Official

NEW TRENDS IN FISCAL STIMULATION EVALUATION

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Abstract

Fiscal and budgetary policy reflects the state's choice for necessary actions to be taken in order to ensure the population welfare and sustainable economic growth, naturally involving revenue mobilization and public spending. The insurance of a long-term macroeconomic growth is driven by several specific mechanisms and instruments, one representing the reduction of fiscal pressure by applying a system of tax incentives.Practically, all countries stipulate in their fiscal policies a robust set of instruments of special regimes, incentives and fiscal facilities to encourage the taxpayer to launch or consolidate his business to generate higher tax levy in the future. Such policies support sustainable economic growth, facilitate R & D-innovation, especially SMEs involved, eco-energy industries and high-value commodities, start-ups in IT, support scientific and technical progress.

Applying tax incentives through their incentive function involves transferring public revenue over the next period, as a result of reducing budget funding capacity, while many researchers and experts qualify postponement of revenue with a "budget expense". In this context, we intend to study in this paper the good practices of applying tax incentives in stable economies and in those aspiring to a higher level of development to identify models for assessing their impact on the budget, and implicitly on sustainable growth. The result of these researches will also be the identification of an optimal model for assessing tax incentives in the context of the specificity of the economy of the Republic of Moldova and the formulation of recommendations on the way of its implementation in order to regulate business stimulation policies by diminishing the fiscal pressure.

Keywords:tax incentives, effectiveness of tax incentives, methodology for tax incentives effectiveness evaluation

JEL classification:E620, H210

Introduction

The necessity to boost economic development requires from the state to operate effectively such a system of taxes, which on the one hand would ensure the consolidation of the revenue side of the budget, and on the other hand would stimulate economic development. Under these circumstances, fiscal incentives play a leading role, being the most important instruments of fiscal policy, which can ensure both economic growth and social issues.

Current development model, which is aimed on stable economic growth to overcome the consequences of the 2007-2009 economic crisis, focuses on multiplying budget spending (Marinas M-C., 2010, pp.52-66), especially those focusing on education, health, pensions, support for low-income groups and the development of certain sectors of the economy. This allows solving some economic problems by correlating budget revenues and expenditures, creating the appearance of a policy with a social focus, but also stimulating the business environment through certain preferential taxation. However, such a fiscal policy, which lead to higher budget deficit is aggravated by the aging population, and in the long run will require increased expenditure on pensions, health and social services for the elderly. This is also true for our country.

To overcome the issue of increasing of the budget deficit, some economists (Toder E., 2005) propose to limit the budget of tax expenditures instead of increasing the tax burden. While tax incentives do not directly involve spending of budget funds, these measures tend to lead to a

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reduction in budget revenues, so they reduce the resources available to resolve the tasks assigned to the state. Since tax exemptions and other tax incentives are in a similar way to budget spending, their use and wider use should be accompanied by justification for their need and effectiveness. Applying the concept of fiscal spending to the budget contributes to this goal. In this respect, it is relevant to study, justify and demonstrate in practice the methodological approaches to analyzing and assessing the tax expenditures of the budget.

Concept of Tax Incentives

Tax policy has a double dimension in the national economy: one refers to the formation of public financial resources; the second is interventionist, which refers to concrete objectives of involvement, support and encouragement. State interventionist measures aims at modeling of the fiscal system and applying of the specific instruments, guiding market mechanisms correctly, influencing economic behavior, removing market distortions, encouraging certain sectors, supporting certain social strata - "to ensure the mobilization of bigger budget revenues, in the conditions of encouraging economic affairs, investments, concomitant promoting equity in their contribution to income, with the provision of social protection". However, when market failures are identified, specific measures must be taken, either fiscal ones, to boost competitiveness to achieve economic growth.

Applying tax incentives through its incentive function implies the transfer of public budget revenues over a future period as a result of reduced budget financing capacity, and researchers and experts qualify postponement of revenue with "budget expense" also called "tax expense" (Loie P., 1990, p. 78).

Awarding mechanism, the incentive addressability and the monitoring procedure are different, but they must always be included in an easy, transparent, predictable system for the taxpayer and society (Toder E., Wasow B., Ettinger M., 2002, p. 28).

The defining of the concept of fiscal incentive is ambiguous. Generally speaking, tax incentives are treated as tax deductions or tax base reductions, which lead to the diminution of tax liabilities of economic agents. In this sense, tax incentives can be considered both, as direct reductions of taxes or duties in the form of total or partial exemptions, as well as certain "tax benefits" that can be found in some sources under a separate classification as "tax preferences". Thus, tax deductions and reductions of the tax rates, low interest rates for tax credit, changes in terms of payment of tax (by providing of the tax credit investment, delaying and rates), which is not specifically in tax law as tax incentives, are often associated with them.

In another approach (2017, p.2), tax incentives are treated as different facilities, favourings, advantages, privileges granted legally in order to reduce the tax burdenTax incentives usually refers to a specific tax and take into account various elements of the tax: the taxpayer (invalids, retirees, students, etc.); the object of taxation that can be diminished (profit, income); the payment term that can be set for a more convenient period (land tax - after harvesting), etc. They represent a separate element, stipulated by the legislative and normative acts of tax (financial) and refer to reductions, exemptions, rebates, deferrals and rescheduling of payments to the budget. Conceptual delimitation of these components of tax exemptions is represented below:

- An exemption represents the deductions from the amount of tax or tax base that is applied to favor certain activities that uses the low-yield labor. They can also have a social character as in case of tax exemption for specific groups of the population. In this respect, exemptions are quantitative forms of tax incentives, as it identifies the exact amount that reduces the taxpayer's debt to the budget;

- The reductions target both social and economic purposes, such as the reduction of the tax base on the reinvested income tax in certain purposes, provided by law. Thus, reductions refers, in the same way as exemptions, to the quantitative component of tax incentives, but this facility is conditioned by the way of spending of the amount of tax liability, unpaid to the budget;

- Bonifications are granted to stimulate certain taxpayers to pay their obligations before the deadlines provided by law, usually before the first payment period. To make bonifications much effective, they have to be extended to more categories of taxpayers, concomitant increasing their

degree of interest, to make payers pay their obligations to the budget in advance, which is an advantage for the state under inflation conditions. In this regard, bonifications are already a more organizational measure, meant to optimize the process of payment of the tax obligation, rather than diminishing its value;

- Postponements and rescheduling are considering delaying payment terms, respectively fragmentation payment of amount to be paid to the budget in several rates, which not involve reducing of the amount of tax liability, but creating of an advantage that taxes can be paid after consolidation of the taxpayer's financial situation (in the case of newly created enterprises with a considerable investment contribution), but also after collection from consumers (in the case of indirect taxes paid in advance, such as VAT on imported goods).

In our opinion, the definition of fiscal incentive and fiscal facility (facilitation) cannot be treated as synonymous. The Dex of the Romanian language defines the notion of incentive as what stimulates, it is an impulse, an impetus, an urge, while the facility is the ability to achieve, to do something without great effort, with ease. Thus, applied to fiscal policy, we consider the definition of fiscal incentive much more opportune, because the effect of reducing of the tax burden on the taxpayer should be seen as an impuls for intensifying the activity of the real economy, the catalyst of economic growth.

In the Republic of Moldova, the notion of *fiscal incentive* is missing in the legislation, but it is understood by the notion of fiscal facilitation, defined in Article 5, point 33 of the Fiscal Code no.1163-XIII of 24.04.1997, which means the amount of tax or duty *unpaid* to the budget under the forms set out in Article 6 paragraph (9) point g). Thus, according to the above-mentioned norm, tax facilities (benefits) are elements taken into account in the estimation of the taxable object, to determine the amount of tax or duty and collecting it in the form of:

- partial or total exemption from tax or duty;

- partial or total exemption from payment of taxes or duties;

- reduced rates of taxes or duties;

- reducing of the taxable object;

- delays in the payment of taxes or duties;

- scheduling of tax liability.

Also in the Fiscal Code is delimitated the tax mechanism, incuding fees for special areas and special tax regimes. Thus, economic agents registered in the Free Economic Zones obtain various facilities related to the payment of income tax, VAT and customs duties, and investors are protected for ten years from legislative changes. At the same time, Article 6, pharagraph (9), point g) of the Fiscal Code provides that *the zero rate of VAT application is not considered a fiscal facilitation*.

Ensuring of the economic growth under the current budgetary constraints implies a rigorous analysis of the efficiency of tax incentives, especially in case of introducing new ones, and following of their economic, financial or social effects.

Evaluating of effectiveness of tax incentives should take into account the objective pursued by them. Thus, social incentives are an irrecoverable loss to the budget and are determined by the amount of financial resources that the state is willing to yield, in particular, from individuals' contribution. On the other hand, stimulating / boosting incentives aim at determining the economic agents on the development of economic sectors of national importance. These incentives can be investment or innovative, and imply real long-term recovery through widening the tax base, creating new jobs, increasing the efficiency of production factors, etc.

While tax incentives are part of the tax expenditure, however they do not involve cash expenditures from the state, such as subsidies or grants, but lost tax revenue. These costs determination is difficult because of influence of certain direct factors:

- the precision with which the incentive / facility stimulates the target activity;

- the level and mix of economic activity that will occur through the application of the incentive / facility, versus what will happen in the absence of the incentive / facility.

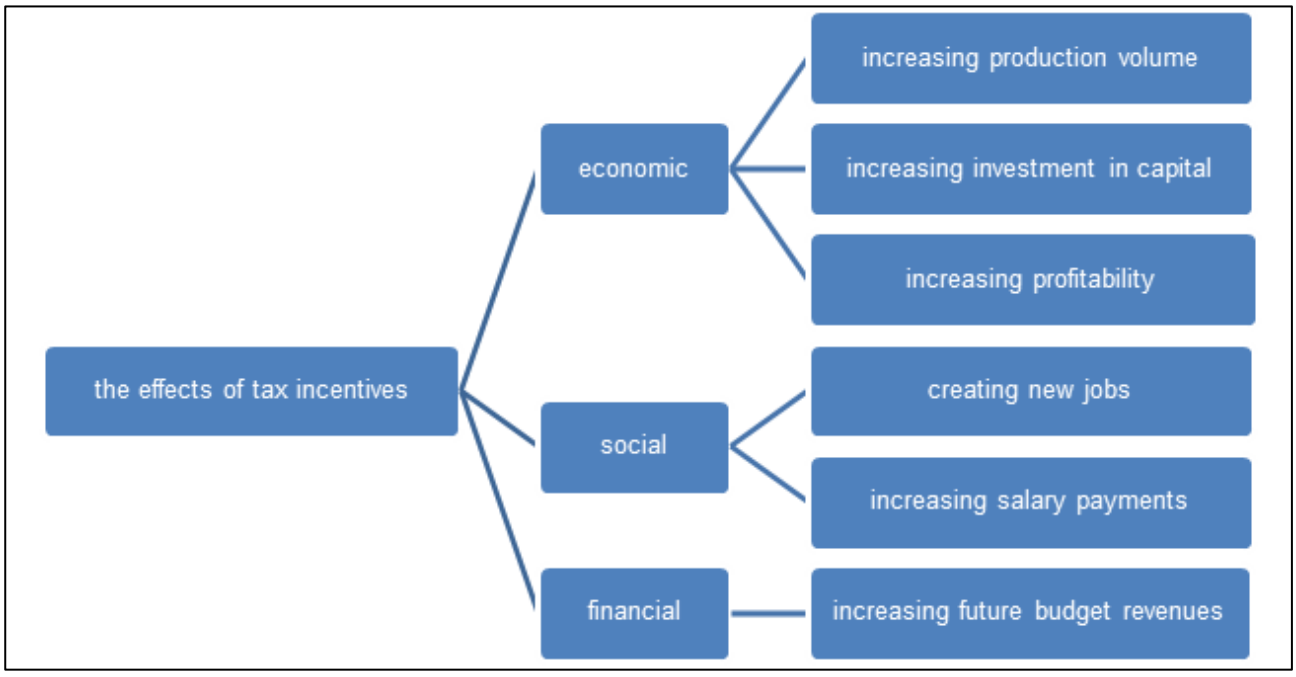
A general methodology for tax incentives effectiveness evaluation should be based on the classification of tax incentives depending on their target component, and the actual assessment shall be distinct for each category of tax incentives. Thus, fiscal incentives can be divided into three categories, according to the environment in which they achieve their efficiency (see Figure 1):

1.social – designed to support certain categories of citizens;

2.financial – which are aimed at eliminating / reducing the reverse financial flows and increasing future budget revenues;

3.economic (incentive) – with the aim of investments attraction and expantion of the economic potential.

Figure 1 - The effects of tax incentives



Source:date proccesedby authors after Igonina L.L., Mamonova I.V., Suleimanov M.M. Assessing the efficiency of tax incentives in thesystem for managing regional finances. Economic and Social Changes: Facts, Trends, Forecast, 2016, no. 6, pp. 180-192.DOI: 10.15838/esc/2016.6.48.10

Based on the analysis of existing literature in this field (Pecarscaia A. Iu., 2014, p.103), we have identified models for assessing tax incentives according to the effect they have on the economy.

1. Determining Budget Efficiency

$$BE_{iB} = \frac{\Delta TB_{iB} \times TR_{iB} + \Delta S_{iB} \times TR_{iIV} + BER_{iB}}{BL_{iB}} \quad (1)$$

BE_{iB} - the budget efficiency of tax incentives under the basic tax system;

ΔTB_{iB} – increasing of the incentives tax base for each category of taxpayer, after providing the incentive *i*;

ΔS_{iB} – increasing of the salaries fund, after providing the incentive *i*;

TR_{iB} – the tax rate under the basic tax system, %;

TR_{iIV} – tax rate on personal income, %;

BER_{iB} – budget expenditure reduction as a result of the incentive *i*;

BL_{iB} – the budget losses (unearned income) after providing incentive *i*.

ΔTB_{iB} – the difference between the tax base of the tax for which the incentive is provided at the end of the period and at the beginning of the grant period.

ΔS_{iB} – the difference between the payroll fund at the end of the period and the beginning of the incentive's providing period.

$BL_{iB}$is determined:

a. if the tax incentive consists in the partial exemption from the tax base

$BL_{iB} = TBR_i \times TR_i$ (2)

TBR_i – the value of the tax base reduction after providing the incentive *i*;

TR_i – the de facto tax rate at the time of incentive's provision, %.

b. if the tax incentive involves taxing at a reduced rate

$BL_{iB} = TB_i \times (TR_{1i} - TR_{0i})$ (3)

TB_i – the size of the tax base subject to tax incentives action;

TR_{1i} – the de facto tax rate at the time of incentive's provision, %;

TR_{0i} – the tax incentive rate, %.

If BE_{iB} value is less than 1, then the efficiency of the provided tax incentive under the general tax regime is low, if greater than 1, the efficiency is high.

2. Determining Social Efficiency Includes the Calculation of the Following Indicators

- Increasing the scriptic number of employees of small business subjects, beneficiaries of the tax incentive;
- Increasing the share of employees of the small business subjects benefiting from the tax incentive;
- Increasing the share of R&D workers in the total number of persons employed in small enterprises applying this tax system;
- Increasing the proportion of people who need social protection employed in small enterprises applying this tax system;
- Increasing the payroll fund for workers from small businesses applying this tax system;
- Increasing the payroll fund for R & D workers in small businesses applying this tax system;
- Improving the conditions and protection of work in small businesses applying this tax system;
- Increasing the overall skill level of workers employed in small businesses applying this tax system;
- Expanding of the provision of services by small businesses applying this tax system, ensuring the availability of services on a wider range;
- Improving the quality and expanding the range of services provided by small businesses applying this tax system;
- Increasing environmental safety in small enterprises in the manufacturing sector, applying this tax system;
- Infrastructure development.

3. Determining Economic Efficiency Includes the Calculation of the Following Iindicators

- Increasing the number of small businesses using this system of taxation;
- Increasing the number of innovative small businesses, using this tax system;
- Increasing the share of small enterprises that apply this tax system to the small business sector;
- Increasing the share of revenues from the sale of products, goods, works, services of small enterprises that apply this tax system;
- Increasing the share of revenue from the sale of innovative, high technology products by small businesses applying this tax system;
- Increasing the share of the volume of industrial production of small enterprises using this tax system;
- Increasing the share of the volume produced by small businesses using this tax system, innovative, high technology products;
- Increasing the share of fixed capital investment of small businesses applying this tax system;
- Increasing spending on R & D of small enterprises applying this tax system;
- Increasing the share of own R & D spending for small businesses applying this tax system;
- Increasing the share of small enterprises that apply this tax system in foreign trade turnover;
- Increasing of innovative products for export in small businesses that use this tax system;
- Reducing the number of small unprofitable enterprises that apply this tax system.

Economic efficiency of tax incentives is considered low, if increasing of the total volume of investments in companies, compared with the fiscal year when incentives have not been applied, does not exceed the amount of tax incentive.

The effectiveness of tax incentives assessment is not the key to success in their management. It is more important to monitor if their application was necessary and purposeful. In most cases, tracking the allocation of tax incentives highlights the following consequences of applications, which do not always lead to the expected result. Once the direct effects of tax incentives are identified, we can also point out the indirect ones, which are mostly negative:

1.the common nature of the incentives, which in many cases refers to certain purposes of encouraging and/or supporting of a sector (ex. innovation) without respecting the principle of their personalization. Thus, not all incentives have applicative arguments, some of which are unnecessary depending on the size of the firm or the nature of its activity within the preferential sector;
2.loss of tax revenue occured as a result of incentives that are not offset by the benefits for society, taking into account the principle of public money efficiency and tax system principles: neutrality, fairness and efficiency;
3.the opportunity cost of tax expenditures and implicit identifying and implementing other forms of encouragement that would have a greater effect based on the purpose and desired effect;
4.fraud, because incentives/support packages and other support measures can be applied by the beneficiary according to their common sense, especially if they are not sufficiently monitored;
5.implications on competition (Bolnick B., 2004), creating unequal conditions between various business representatives, and respectively generate an asset concentration effect for beneficiaries.

Conclusions

Application by the taxpayer of tax incentives is a legitimate way to reduce his tax liabilities. Therefore, it seems necessary to assess the effectiveness of the tax benefits, both when introduced into the tax legislation and for a further prolongation.

Currently, evaluation of the effectiveness of tax incentives is performed only in case of adoption of the draft law on incentive establishing. Subsequently, neither income losses nor economic and social results obtained from the application of the tax incentive are monitored. All these makes it very difficult to make decisions about introducing new tax incentives, canceling existing tax incentives or extending them. Summarizing the above, and analyzing tax incentives assessment mechanism in the literature, we conclude the following:

There is no single and comprehensive methodology for assessing the effectiveness of tax incentives, which can be applied within even a single tax system. For each type of incentive, each purpose and group of taxpayers, it is desirable to develop optimal models for assessing the incentive efficiency according to the expected effect.

Assessment of efficiency of tax incentives can increase the transparency of the tax sphere, but also increase the compliance of taxpayers.

Assessment of tax incentives effectiveness contributes to tax regulation optimization of the entrepreneurship by selecting the most effective incentives for their development.

The economic efficiency of tax incentives is monitored/evaluated in terms of indicators that reflect the dynamics of economic outcomes such as revenue growth, increased labor remuneration, fixed capital growth, reduced production costs, and job creation.

Approach in terms of social impact analysis refers to indicators: the creation of new jobs, engaging of socially vulnerable people, and improvment of products and services quality offered by some organizations, increasing in welfare.

Establishing fiscal policy objectives for each period of national economic development, selecting appropriate tax regulation instruments, adhering to the principles of tax incentives will enable the state to exert an effective influence on socio-economic processes in society.

Bibliography

Bolnick,B., (2004), Effectiveness and Economic Impact of Tax Incentives in the SADC Region.Technical Report to USAID/RCSA SADC Tax Subcommittee. SADC Trade, Industry, Finance and Investment Directorate;

Câmpeanu, E. M., Timuş, A., Trofimov, V., Pădurean, E. (2012), Tax and budgetary policies in economic theories, Chisinau: IEFS, p.112-132;

Clark, J., Arnold, E., (2005), Evolution of Fiscal R&D Incentives, Report to CREST OMC Panel, Technopolis, p. 5;

Cuterghina,G. V., Mingazinova,E.R. (2014),Methodology for assessing and monitoring the effectiveness of tax incentives: approaches and challenges. In: Izvestiya of the Far Eastern Federal University. Economics and Management, no.1, p. 84-99;

Dobrota, N., (coord.) (1999), Economic Dictionary, Economica Publishing House, pp.354, 356;

Hungerford, T. (2006), Tax Expenditures: Trends and Critiques. CRS Report for Congress. September 13, p. 11;

Kesti, J., (ed.), (2007), European Tax Handbook 2007.Amsterdam: IBFD ;

Loie, P. (1990), Finances publique, Cujas, Paris, p.78-79;

Malinina, T. A., (2010), Evaluation of tax incentives and exemptions: foreign experience and the Russian practice. Scientific works no. 146P, Moscow: Institute for Economic Policy, E.T. Gaidar, 212 p;

Marinas,M-C., (2010), The effectiveness of fiscal policy in fighting the economic crisis. An analysis based on economic literature,Theoretical and Applied Economics, Vol.XVII, No. 11(552), pp. 52-66;

Toder, E., (2005), Tax Expenditures and Tax Reform: Issues and Analysis. National Tax Association;

Toder, E., Wasow B., Ettlinger M. (2002), Bad Breaks All Around: The Report of the Century Foundation Working Group on Tax Expenditures. The Century Foundation Press;

Pecarscaia,A. Iu., (2014), The methodology for evaluation the effectiveness of tax regimes for small business, Modernization. Innovation. Research, Vol. 5, no. 1(17), p.102-106;

Yarkin, A.M., (2013) Analysis of the Impact of Taxes on Growth from the Point of Industries and Businesses, Moscow, Russian Academy of National Economy and Public Service under the President of the Russian Federation. Electronic copy available at: http://ssrn.com/abstract=2329717;

* * * (2017) Customs, Periodicalpublication of thecustoms service, no. 1(31), p. 2-20;

* * * (1997), Fiscal Code of RM, no.1163-XIII, Title I, art. 5 p. 33, art. 33-35;

* * * (1997), Fiscal Code of RM, no.1163-XIII, Title I, art. 6, pharag. 9, p. g);

* * * (1997), Fiscal Code of RM, no.1163-XIII,Title II, chapter 7„Taxation of certain categories of taxpayers", art. 49. Economic agents' residents of free economic zones;

* * * (1997), Fiscal Code of RM, no.1163-XIII, Title II, chapter 7^1 and 7^2.

CURRENCY, FINANCIAL INSTITUTIONS, AND NOMINAL ECONOMY

THE BANK VALUE ESTIMATION PROBLEM

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Abstract

This article reports to the main issues in evaluating bank costs and identifying factors have influence on. The necessity of bank evaluating may occur at various times, such during its merger or purchase, but also during reorganization or insolence sanitation of a financial institution. In such a case, the correct assessment of the bank value could lead to positive synergy effects; assessment errors might have disastrous social effects through its depositors 'debt undervaluing.

The article contains analysis of the main models of bank costs, correlated with the needs of this evaluation, and also their reporting during the evaluation of Moldova's bank costs in the process of selling its shares.

Keywords: evaluation, commercial bank, cost sheet, methods and approaches of valuation.

JEL Classification: G15, G21

Introduction

Global business and finance management is increasingly geared towards an economic category, such as the value of an economic entity (business). Today it is difficult to imagine our business functioning without a full and regular assessment. Valuable thinking and application of modern valuation methods become widespread, as a clear understanding of the value and capabilities of its assessment provides guidance for informed decision making in business and is a prerequisite for success in a modern competitive environment.

Description of the Problem

The current state of the banking system of the Republic of Moldova is characterized by a low capitalization in comparison with the developed countries' banking systems. This issue is particularly important in the context of Moldova's aspirations to join the European Union, which involves fierce competition between Moldovan banks and non-resident credit institutions.

The cost of a commercial bank is now the most important indicator, which allows a more accurate measurement of the effectiveness and efficiency of its operations. The passage of the domestic banking system to the international financial reporting standards, the adoption by the National Bank of Moldova of a set of normative acts regulating the activity of the banks, emphasized the necessity of imposing stricter requirements on the method and procedure of banks' assessment. The crisis and the frequent economic shocks on the financial markets determine the search for different fundamental approaches to assessing the value of banks that are appropriate to the current situation.
However, the methodology and practice of assessing business costs, which are quite active in the Republic of Moldova in recent years, at the moment do not take into account the specificities of banks' activity and require revision in relation to this area of activity.

Methodology and Data Sources

The theoretical and methodological problems of estimating the value of the bank were reflected in the works of such foreign authors as M. Adams, M. Rudolf, N. Antill, Lee, J. Begley, A. Damodaran, T. Copeland, A. Kummel, K. Mercer, S. Pratt, etc. In the works of these authors, the principles and peculiarities of assessing the value of banks are described in sufficient detail and depth. Nonetheless, general approaches are generally presented in foreign literature that must be interpreted specifically to determine the value of banks.

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Exceptions are the work of some German and Anglo-American researchers, which contain detailed methodological approaches to assess the market value of Western commercial banks. Generally, they can be used to assess internal credit institutions, but subject to appropriate changes reflecting the specificities of the Moldovan banking sector.

The purpose of this article, taking into account the specificity of business value assessment in the banking sector, is to present the main steps of a commercial bank evaluation process. The evaluation process is a succession of actions that ensure data collection and analysis, cost calculation and formulation of evaluation results in the report. Assessing the market value of a modern commercial bank is a complex, multi-stage process that ultimately has to solve the main task the assessor is facing - to determine the fair value of the bank at a certain time.

The main function of the financial markets is the efficient and intertemporal allocation of capital, as financial markets tend to imperfections and show deviations from performing this function.

Generally, financial intermediaries, especially banks, owe these inefficiencies to the distribution of capital from those with surplus to those in need, namely reducing transaction costs and, at the same time, effectively selecting those with capital needs in line with their risks, thus solving problems of informational asymmetry.

When defining a bank's business as accepting deposits (short-term) and issuing loans (in the longer term), this is consistent with the definitions in the literature. As such, according to the researchers RH Schmidt, A. Hackethal and M. Tyrell, the bank is one of the oldest financial intermediation institutions and continues to play an important role in the economy for capital allocation - despite discussions about the disintermediation of the sector financial. [1] However, technological advances have had a profound effect on the banking sector and have generated global consolidation of the sector. For example, in Germany, consolidation is also in full swing, but it lags behind. Germany's banking market, according to A. Hackethal, is still very fragmented, often attributed to the three-pillar institutional separation. [2]. However, the strict delimitation of this system in three pillars is under discussion, possibly opening the gates for further consolidation on the largest European banking market.

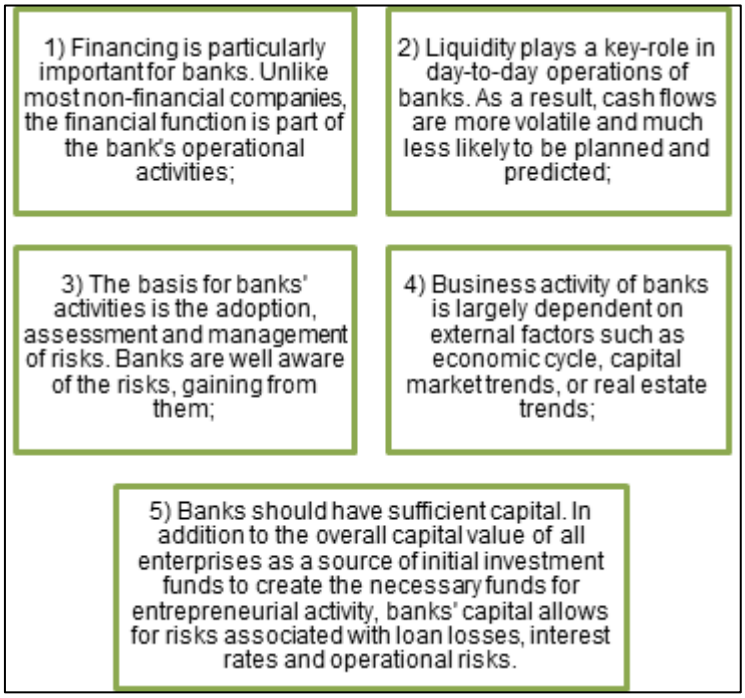
In view of these considerations, the value of banks is clearly a matter of interest, whether it is equity-centered management or in the course of a merger or acquisition.

Although corporate valuation is one of the central issues of corporate finance and has attracted broad coverage in the literature, we argue that a bank's business has peculiarities that deserve separate treatment in addressing the cost of assessing it. Thus, economist A. Damodaran (2002) states that „The basic principles of valuation apply just as much for financial service firms as they do for other firms. There are, however, a few aspects relating to financial service firms that can affect how they are valued” [3].

When analyzing the characteristics of financial institutions, Sviridenko Yu.N. [4] identified five main factors that could significantly influence the choice and construction of the business value model for commercial banks as shown in figure 1.

The characteristics of banking activity that motivate a distinct approach to evaluation can be described in four categories. First, due to its central role in the development of the economy, the banking sector is typically a highly regulated industry covering a wide range of provisions, such as market entry, deposit insurance, credit risk requirements, liquidity regulation [5]. Secondly, banks perform operations on both sides of the balance sheet, actively seeking to achieve profit not only from loans, but also from attracting capital, a long-standing duality that has not been fully understood by economists until the end of the nineteenth century: it is a trader whose business consists in buying money and debt by creating other debts" [6].

Figure 1 - Influencing factors in choosing and building valuation models for commercial banks


1) Financing is particularly important for banks. Unlike most non-financial companies, the financial function is part of the bank's operational activities;
2) Liquidity plays a key-role in day-to-day operations of banks. As a result, cash flows are more volatile and much less likely to be planned and predicted;
3) The basis for banks' activities is the adoption, assessment and management of risks. Banks are well aware of the risks, gaining from them;
4) Business activity of banks is largely dependent on external factors such as economic cycle, capital market trends, or real estate trends;
5) Banks should have sufficient capital. In addition to the overall capital value of all enterprises as a source of initial investment funds to create the necessary funds for entrepreneurial activity, banks' capital allows for risks associated with loan losses, interest rates and operational risks.

Source: adapted by author after MacLeod, H. D.

From a financial point of view, this involves relatively few fixed assets, resulting in a low operating leverage and a relatively high financial effect; compared to wage earnings volatility [7, p. 51–60]. Thirdly, and as a consequence of the previous point, banks are exposed to credit risk, but unlike other economic entities, they are actively seeking this type of risk as part of their business model. Last but not least, the profit and the value of the bank strongly depend on the interest rate risk on the bank's operations.

Combating each of these four points is unequal complexity. The solution to the first problem is simple, as the regulatory framework is usually known and identical for all banks. Regulations need to be considered, but they impose deterministic structural restrictions on an evaluation model. Similarly, the second feature does not raise much trouble. Instead of applying the method of measuring cash flows to all company applicants and reducing them to the weighted average cost of capital, the bank must rely solely on the equity method, treating interest charges as a cost, namely a running cost. Appropriate credit risk measurement of a bank's assets is a more difficult issue. However, its effect on the value of the bank is obvious - a downside risk proportionate to the credit risk of the loan portfolio, leading to the application of credit portfolio management models to take account of its effect on the value of the bank [8, p. 59–117].

Summarizing the opinions of well-known assessors such as R.H. Schmidt, A. Hackethal and M. Tyrell, M. Crouhy, D. Galai, etc., we have identified the characteristics of the bank's assessment compared to non-financial companies and issues evaluation results from these characteristics, presented in table 1.

Many Western economists, T. Copeland, T. Koller, J. Murrin [9], J. f. Sinky [10], etc., considers that the assessment of the bank may be conditionally divided into an external assessment (external evaluation) and an assessment by insiders (internal evaluation). An insider in this case should be understood as a legal or physical trustee of the bank, through which confidential information can be obtained. The main difference between internal and external evaluation is that when assessing the position of an insider, the evaluator has much more information, including confidential information, and therefore such assessment is more competent and more accurate in the outcome final.

Table 1

Problematic issues regarding the value of the commercial bank

Features	Characteristics
Strict regulation and supervision of the activities carried out by government bodies, including the NBM	Supervisory authorities impose certain capital adequacy requirements, taking into account the risk of a particular financial institution, the liquidity of the balance sheet, the solvency. In some cases, regulatory restrictions allow for excess revenues and higher costs. In other cases, the same regulators, by forbidding organizations to enter a business, can limit the excess revenue they are likely to obtain.
Excessive value of intangible assets	The existence of intangible assets that are not reflected in the balance sheet but indirectly can generate revenue. Guarantees, licenses and participation in the Deposit Guarantee Scheme are independent assets having their market value and should therefore be taken into account when assessing the value of a credit institution. when buying a bank as a business, maintaining staff, management, customers, by winning their loyalty are key tasks for new owners.
The low level of equity and the high share of borrowed funds	If for a productive enterprise this quota can range from 25 to 70%, then banks have a share of own funds in assets at the level of 10-15%, and the world's largest banks are working on capital, which is less than 10 % of total assets. Thus, the resource base or market positions have almost the smallest impact on the value of the bank compared to its capital. However, the impact of real capital on the assessment is quite high.
The low degree of operational profit in the bank's capital	From the owner's point of view, the bank's profit - not just current revenues and expenses, but also the difference between the purchase price of the bank and the selling price, which can significantly and substantially higher than the current operating profit over the investment. focuses on maximizing value rather than the result of current financial conditions in emerging markets more than is justified and leads to the impossibility of accurately assessing the bank on the basis of its accounting value. Often the value of the bank can not be determined by the cash flow analysis, which is distorted in the presence of tax optimization, accounting methods and technical adjustment of the balance
Particularities of accounting	The complexity of the valuation is that all credit institution operations are reflected only on paper. Unlike industrial enterprises, if the availability of tangible property can be checked by inventory, almost any credit institution's transaction is just an accounting record
Increased degree of risk concentration in the bank's balance sheet and significant impact of financial leverage	Banks' risks related to their operations are superimposed on the risks of client operations that attract bank credit as a source of funding
Difficulties in executing and executing a number of transactions	For example, transactions in securities, derivative financial instruments and many other transactions

Results Obtained

The assessment of a bank begins with an understanding of its business model, reflecting its operational activities, revenue sources and cost structure. A bank is "an institution whose current operations consist of granting loans and receiving deposits from individuals," says scientist X. Freixas and C.J. Rochet [11]". As such, the bank wishes to obtain profit on both sides of the balance sheet, which is called bank duality researchers. For the time being, we will be abstaining from taxes, minimum reserves and other sources of income, in addition, we will also neglect the implicit risk of bank customers for the beginning. Then, the bank's profit, π, can be declared in the

simplest form as the difference between the return on assets and the cost of the liabilities, excluding general and administrative costs, C [11].

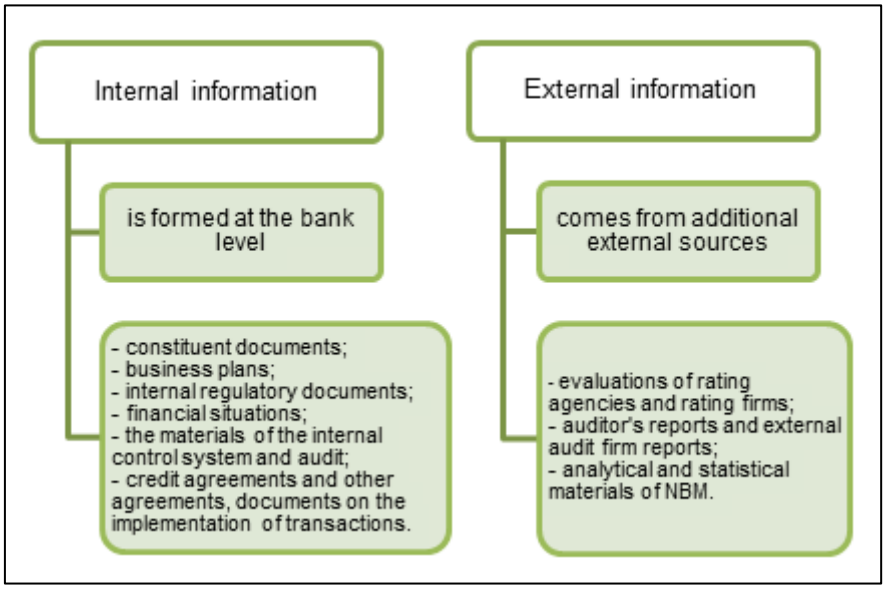
$\pi = rA \times A - rL \times L - C = NII - C$ (1)

Expression $rA \times A - rL \times L$ represents the net interest income of the bank and the equation is thus transformed:

Profit = Net interest income - General and administrative costs (2)

In the opinion of russian scientist K. Reshotkin [12], it is advisable to mention another version of the bank's estimate of value - a mixed one. Such an assessment cannot be entirely attributed either to external or internal estimates. The joint assessment, on the one hand, is carried out by an external evaluation company, which has some methodological bases and experience in the evaluations it carries out, and on the other - it is based on both external public data and certain confidential information of the credit institution. In this case all information available to the evaluator can be divided into two large blocks: internal and external (figure 2).

Figure 2 - The information base for the assessment of a commercial bank


Internal information
is formed at the bank level
- constituent documents;
- business plans;
- internal regulatory documents;
- financial situations;
- the materials of the internal control system and audit;
- credit agreements and other agreements, documents on the implementation of transactions.
External information
comes from additional external sources
- evaluations of rating agencies and rating firms;
- auditor's reports and external audit firm reports;
- analytical and statistical materials of NBM.

Source: adapted by the author after Reshotkin K.A.

Consistent with the viewpoint of economist K. Reshotkin, we believe that making this type of assessment is particularly important for our country. The client of the joint assessment may be either the credit organization itself in the senior management or its owner in the person of the shareholders and other holders of capital. A mixed assessment can be done to improve the quality of the current and long-term management of the bank's assets and capital; determining the market value of equity for shareholders, and attracting additional funding.

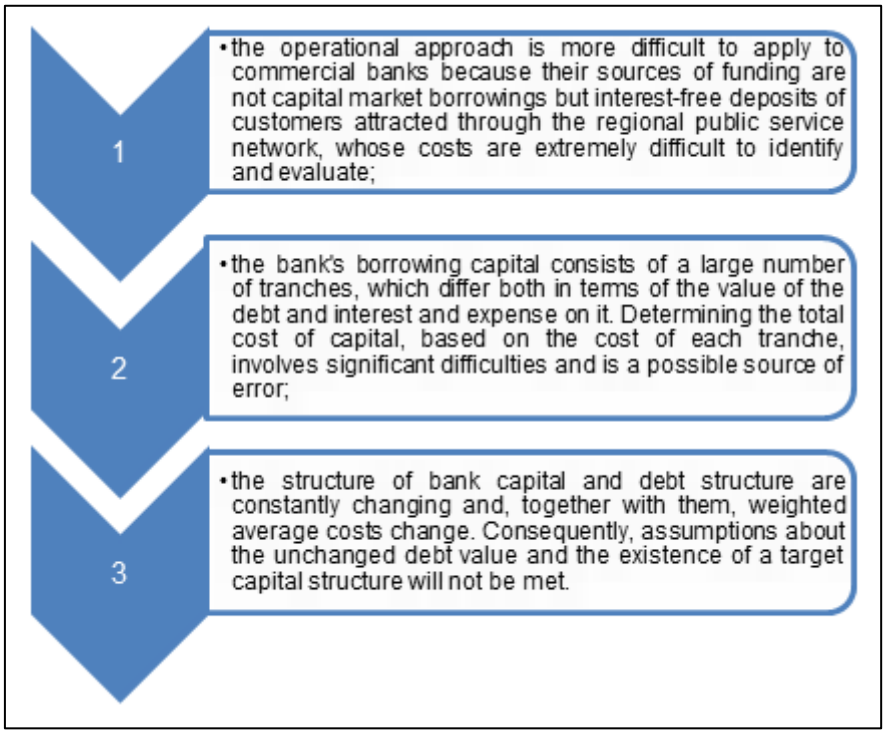
In this context, we can identify the following main issues (difficulties) that have arisen in the process of assessing the value of a commercial bank:

- strict regulatory requirements for the assessment, on the one hand, and the lack of essential elements of the bank's assessment process, on the other;

- the existence of specific characteristics for the commercial bank's assessment of the fact that the modern credit institution is a rather complicated object to be assessed by virtue of the fact that most information is confidential, the strict regulation of activities by regulatory bodies, and the concentration of risk on the balance sheet.

Regarding the particularities of commercial banks, especially with a special financing function, the practical application of models based on the operational approach is difficult. The main issues are described in figure 3.

Figure 3 - Deficiencies in assessing the value of a commercial bank


1
•the operational approach is more difficult to apply to commercial banks because their sources of funding are not capital market borrowings but interest-free deposits of customers attracted through the regional public service network, whose costs are extremely difficult to identify and evaluate;
2
•the bank's borrowing capital consists of a large number of tranches, which differ both in terms of the value of the debt and interest and expense on it. Determining the total cost of capital, based on the cost of each tranche, involves significant difficulties and is a possible source of error;
3
•the structure of bank capital and debt structure are constantly changing and, together with them, weighted average costs change. Consequently, assumptions about the unchanged debt value and the existence of a target capital structure will not be met.

Source: adapted by the author after Reshotkin K.A.

Under these circumstances, the most acceptable valuation models are the shareholder's updated cash flow model and the residual profit model. Due to the specificity of commercial banks, the construction of these models has several features in terms of cash flow calculation, its forecasting and terminal value calculation. When calculating the updated cash flow for a shareholder and its forecasts, it is necessary to take into account that the standard scheme applied in the valuation of productive enterprises is not applicable to commercial banks. The main difficulties with its use for banks are reduced to the issue of establishing net capital costs (capital expenditures, CapEx) and net working capital (NWC).

For commercial banks, it is more appropriate for the free cash flow for the owner to be calculated as the difference between the adjusted net profit for non-monetary components and the change in the value of assets as well as the debt obligations. When calculating the terminal value for commercial banks, the baseline use of last year's cash flows in the forecast for next year is not fair. Banks' cash flows are volatile, so a certain year cannot reflect their sustainable value. This also applies to residual profits. The problem of choosing an acceptable model for bank management can be reduced to the issue of choosing a model for operational and strategic management. For strategic management, the residual profit model is the most applicable when:

- expected cash flows have a negative value over the entire forecasting period.

- accounting data reflects distorted information on financial performance.

The use of a free cash flow model is preferred when:

- expected cash flows over the forecast period are positive;

- there is certainty in predicting the terminal value;

- the need to use models is conditioned by the need to justify investment decisions.

For operational management purposes, residual profit models should be used as they are better aligned with the internal planning and forecasting process used by banks.

Conclusions

An analysis of the existing methodological basis for assessing the value of the bank allows us to conclude that neither foreign or local economists have yet succeeded in forming a full methodology

for assessing the value of a commercial bank. This is due to the specific nature of the banking sector and the dynamic nature of its development. Foreign concepts, mainly reflected in German and British scientists in the UK and the US, are attempts to assess the value of banks using separate approaches and models. Passing banks to International Financial Reporting Standards has forced banks to assess most assets and liabilities in line with the fair value approach. Applying the concept of "fair value" and the reliability of its assessment are quite problematic today, as this form of value does not appear in any of the regulatory documents. This has a significant impact on the conditions and specificities of the banks' assessment and requires special attention to the calculation of the value of individual assets and liabilities of a commercial bank.

Future Directions to Be Approached

In the context of these approaches, it is necessary to identify the advantages and disadvantages of implementing the existing methods of assessing the value of the bank in order to identify the best method that will correlate both the legislative aspect (alignment with the requirements of BASEL III) and the practical aspect, the opportunity to use the best method. Of course, the achievement of these goals is also generated by the preparation of the banking sector, especially of the commercial banks, for just and timely evaluation.

Bibliography

Buser, S. A., Chen, A. H. and Kane, E. J. (1981), 'Federal deposit insurance, regulatory policy, and optimal bank capital', Journal of Finance 35, p. 51–60

Carey, M. and Stulz, R. M., eds (2006), "The Risks of Financial Institutions, National Bureau of Economic Research Conference Report, The University of Chicago Press, Chicago, Il, USA.

Copeland, T., Koller, T. and Murrin, J. (2000) Valuation—Measuring and Managing the Values of Companies. John Wiley Sons, New York.

Crouhy, M., Galai, D. and Robert, M. (2000), A comparative analysis of current credit risk models', Journal of Banking and Finance, p. 59–117

Damodaran, A. (2002), Investment Valuation, 2. edn, John Wiley & Sons; New York, USA

Freixas, X. and Rochet, J. C. (1997), Microeconomics of banking, MIT Press, Cambridge, MA, USA

Hackethal, A. (2004), The German Financial System, Oxford University Press, chapter German banks and banking structure, pp. 71–105.

MacLeod, H. D. (1875), Theory and Practice of Banking, 3rd edn, Longman, Brown, Green and Longmans, London, UK.

Reshotkin K.A. (2002) Market value estimation of a commercial bank. Moscow: TEIS, 286 p.

Schmidt, R. H., Hackethal, A. and Tyrell M. (1999), "Disintermediation and the Role of Banks in Europe: An International Comparison". Journal of Financial Intermediation Volume 8, Issues 1–2, January, p. 36-67

Sinky J. (2007), "Financial management in commercial banks and in the financial services industry". Moscow: Alpina Business Books, 1018 p.

Sviridenko, Ju. N. (2011). Metodologija izmerenija cennosti kommercheskih bankov v ramkah koncepcii cennostno–orientirovannogo menedzhmenta [Methodology of banks valuation within the concept of value-based concept]. Avtoreferat dissertacii na soiskanie uchenoj stepeni kandidata jekonomicheskih nauk [Author's abstract of Ph.D. thesis in Economics Science].

THE ROLE OF THE INFLATION EXPECTATIONS IN THE MONETARY POLICY PROMOTING

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Abstract

This article reviewed the defining aspects of the inflation expectations with their repercussions on the monetary policy efficiency, being considered in the current economy a decisive channel of the monetary policy transmission mechanism to the real economy. The accents were put on the typology and the determinants of inflation expectations in the context of their estimation methods. The practical research focused on the study of inflation expectations in the light of the international experience, as well as it has been formulated some reflections on the anchoring of inflation expectations in the Republic of Moldova on the nature of their compatibility with the domestic monetary policy. The analyses conducted confirm that the inflation expectations in the Republic of Moldova are considerably dependent on the transparency of the monetary policy promoted by the National Bank of Moldova, along with the National Bank of Moldova's commitment to ensuring the inflation target goal.

Keywords: inflation, monetary policy, central bank, inflation expectations.

JEL classification: E31, E52, E58.

Introduction

Inflation is one of the most common structural imbalances of economies in transition; it is also one of the most complex and controversial economic issues. The efforts made by both sovereign governments and continental-level unions to maintain price stability have crystallized in a modern form of monetary policy called inflation targeting. Direct inflation targeting is a monetary policy strategy characterized by the public adoption of a quantitative inflation target for one or more time horizons and the explicit assumption of price stability as the primary objective of monetary policy. The successful implementation of the inflation targeting regime involves the instrumentation and meeting of initial or preliminary conditions, grouped into *macroeconomic*, *institutional* and *operational premises*.

Macroeconomic premises such as the full commitment of the central bank to achieve price stability, a major monetary policy objective that goes beyond the targeting of any other anchors or variables, such as the exchange rate or the unemployment rate, or the institutional ones such as the independence and full freedom of the central bank to choose instruments in conducting its monetary policy, are widely discussed in the speciality literature. The operational premise, which, among other things, requires transparency, good communication capacity and an operational framework for guiding monetary policy, is less discussed in the context of communicating monetary authorities to the public in order to form a vision of its response to monetary policies. Namely, this reaction, called "inflationary expectations", also has an influence far from being neglected on the level of inflation, the size and the way of action that we are proposing to continue to demonstrate.

The Relationship between Inflation Expectations and the Level of Inflation

One of the factors generating inflation, which is particularly important in emerging economies, is that of the inflationary expectations that are reflected in the economic entities' forecasts regarding the evolution of inflationary processes in the future. Business investment decisions are directly related to expectations of future product price levels, rising prices for inputs, resources, etc. Estimates show that economic expectations have contributed an average of 40% to the formation of inflationary processes (Ticinschii, 2016), and several studies in the field assign this factor a key role in inflation management policies, underlining that inflation may become controllable only if the

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central bank can collect, assimilate, and use information from the real sector through inflationary expectations.

The inflationary expectations of economic agents determine the prices on the finished goods markets, but also on the factories' markets, first of all, on the labor market. Expecting to raise prices in the economy, people with salary in advance pay higher wages. The latter exceed the level of price increases at a higher pace than the one created in the absence of inflationary expectations. And wage increases lead to an increase in production costs, which, even in an economic competition, lead to an increase in prices for the final product. At the same time, inflationary expectations directly affect the interest rate and money demand: if interest is lower than the anticipation of inflation, it is reasonable to abandon current consumption or place investments on the financial market, opting for the real assets.

As people make different economic decisions, taking into account their ideas about the future situation, their expectations turn into a powerful factor that affects even the development of events. Inflationary challenges are particularly dangerous because they provide an intrinsic inflationary nature. For example, people living under constant expectations of general price levels will be willing to store a quantity of goods for the future, fearing that their prices will soon increase even more. Manufacturers, believing that the prices of raw materials, equipment, and components will increase, and wanting to protect themselves, will overstate the price of their products repeatedly.

A fundamental perspective of the inflationary expectations revolution is that expectations about future monetary policy have a major impact on the evolution of economic activity. As a result, the systematic component of decision-maker actions - that is, the anticipated component - plays an essential role in the conduct of monetary policy. Indeed, management of expectations about future policy has become a central element of monetary theory, as outlined in Woodford's (2003) synthesis. Although the evidence for the proposed ineffectiveness of policies proved to be weak (Barro, 1977; Mishkin, 1982a, b, 1983), the point of the revolution of reasoning expectations argued that the impact of monetary policy on the economy is substantially influenced by the fact that it is anticipated or not widely accepted.

Research in this field has highlighted the importance of anchoring inflation expectations in order to give monetary policy a maximum of efficiency and optimism, and international experience has demonstrated the need to define inflation expectations as a channel for the transmission of monetary policy decisions to the real economy. Assimilating the proper functioning of the transmission mechanism denotes the correctness of choosing the right tools to correct possible monetary policy errors with minimal costs and maximum effects.

Types of Inflation Expectations

The role that expectations play in the inflationary process lies at the heart of the differences between traditional theories of explaining inflation and theories that have emerged over the past fifty years.

The concept of "anticipation" in economic thinking has been formulated by John R. Hicks (1946), which deals with this concept in the "Value and Capital" paper.

An anticipation is an affirmation about an unknown future event, distinguishing to a small extent from anticipation or prediction. A prediction can be considered as a more precise expectation, it is an explicit and especially quantitative form of anticipation (Muth, 1961).

Rational expectations are "inspirational predictions of future events, they are essentially similar to the predictions economic theory gives to those events." From the original wording, a decade had to pass so that the notion of reasoned expectations could be accepted by economists.

The theory of anticipation has as main supporters in **T.J Sargent**, **N. Wallace** and **Lucas R.E**. Sargent and Wallace, in the work published in 1973 "Rational Expectation and the Dynamics of Hyperinflation", define the central concept of this theory as follows: "We say that the predictions in relation to a variable are rational if they depend to the same extent on the same elements that economic theory considers to effectively determine that variable. "

The way in which individuals form their expectations of the inflationary process is still a topic of debate in the field of economic sciences. From the adaptive anticipation model, the model of rational expectations has been reached. Even the latter, although widely accepted, is adjusted to better fit reality, hence the almost rational expectations model.

Adaptive expectations are applied in the case of inflation forecasts made by economic agents. They assume that the expected inflation depends on the difference between the expected inflation for the present moment and its actual realization. Thus, future inflation is the extrapolation of past inflation information to the view of the future inflation rate of economic agents.

In the case of **rational expectations** Sargent and Wallace (1976) succeed in demonstrating that the distribution of probability for production does not depend on the rule of the supply of valid currency and the optimal rule is the one that manages to bring the value of the monetary policy target chosen to the level expected for that period; , last but not least, points out that, in the case of the choice of an interest rate as an instrument, there is no single level of price equilibrium.

Near-rational predictions in recent works, though difficult to accept in the context of such a broad recognition of rational expectations, are the premise to explain why declining inflation sometimes occurs at such a high cost.

John Roberts (1998) shows this by observing surveys on inflation expectations. He concludes that the public is not perfectly informed and that rational expectations are a little exaggerated assumption, suggesting the existence of a combination of rationality and adaptation. In addition, Roberts (1998) said that in some cases we can talk about rigid expectations. This would be the case for forecasters who are cautious in immediately recording any radical change of variable. And this also influences the forecasts of agents in the economy, as many of them form their opinions based on predictions published by media specialists.

The Role of Inflation Expectations in the Formation of Monetary Policy Decisions

Why would you need to explain so thoroughly the theory of inflation expectations? Recent experience has shown that a strategy of transparency and follow-up of simple monetary policy rules can produce considerable performance in relation to the expected outcomes of the inflation targeting regime.

An essential role in the functioning of this regime lies in the anchoring of inflation expectations at the level of the inflation target announced by the central bank and hence in effective communication with the public. In relation to this aspect, it is invoked to fulfill or to confer characteristics that can be synthesized as follows:

- External communication involves explicitly announcing the inflation target, possibly including a plus / minus margin expressed in percentage points;
- Periodical availability of clear and concise information on monetary policy conduct to the public on the basis of an inflation report but more comprehensive in terms of macroeconomic developments and shocks from the economy;
- Announcement of changes in monetary policy, mentioning the arguments and an assessment of the expected impact on inflation by operating the announced changes;
- Consider the slippage from the inflation target as a possibility, and when it comes to it, it is necessary to explain them in terms of the causes and measures proposed for remediation;
- The communication of macroeconomic policies and performance must be based on regular data analysis.

A central bank that does not pursue a policy of communicating with the public about the exerted anti-inflationary measures may have no influence on the expectations of the private sector. Thus, in the inflation forecasting model, behavioral variables are taken as exogenous data, adjusting agents' forecasts by observing the marginal cost variation directly related to production. In the case of a discrete monetary policy, the model highlights the short-term existence of a gap between the

inflation rate and the target set as long as there is demand-driven inflation. Removing this gap would only be possible in two cases: when there is no inflation by demand or when the final target is not taken into account as being important in formulating a function of social utility or loss. If one of the central bank's complementary objectives in the inflation targeting regime is also a positive development of a macroeconomic indicator (GDP achieved to exceed potential GDP), this would lead to a suboptimal situation, with the level of inflation exceeding Constant target, favoring imbalance.

However, even in a discretionary policy, if the importance given to inflation by the Central Bank's management exceeds the importance it attaches to the public, the results may be similar to a situation where the Central Bank chooses a transparency policy.

There are other dangers associated with a policy where the Central Bank does not communicate with the public. Martin Eichenbaum (1997) outlines this situation, which he calls the Expectations trap. Agents form an imperfect forecast of the inflation rate for the next period, concluding that it will increase. As an adjustment, they will raise prices and wages. At this point, the Central Bank faces a dilemma. He may choose not to comply with public expectations and risk a recession. If he does not, the only solution is to generate inflation. The only way out of such a spiral would involve long recessions, until the expectations of the private sector would adjust to reality.

The inflation targeting strategy puts a special emphasis on the revival of the mechanism of transmission of monetary policy impulses through the central bank's interest rate channel. The interest rate set by monetary policy decisions directly affects money market interest and indirectly interest rates on deposits and loans provided by banks to customers. Anticipations to monetary policy rate changes affect long-term interest rates, driven by market expectations of short-term interest rates. Then the transparent central bank's monetary policy is a guide in the expectations of economic agents about the future of inflation and, implicitly, the evolution of prices.

Through the permanent information relationship it maintains with the public, the Central Bank has the possibility to shape the population's expectations, but only if it convinces through credibility. It follows that a high level of central bank credibility has the special quality to set expectations in terms of price stability, in which case economic agents will not operate on rising prices for fear of inflation or will reduce them due to disinflation.

The interest channel as a mechanism for the transmission of monetary policy is not lacking and some imperfections. The first is that the inflation rate responds with a considerable 1-2-year time lag to monetary policy measures. As a result, the cost of the information needed to use such a channel may reach an appreciable value, superior to an alternative solution that may be applied by the central bank. Secondly, due to the considerable lag, the public can not directly see the effectiveness of the measures taken, which can lead to the loss of the Central Bank's credibility.

In order to exclude these imperfections, there are many solutions in economic theory. For example, Svensson (1996) suggests establishing the inflation projected by the Central Bank as an intermediate target. Such a measure is perfectly consistent with the transparency policy and the rational expectations hypothesis, as the Central Bank experts' forecasts are used. And unlike the final target, the intermediate target can be controlled and observable. In some cases, however, this method has its imperfections, in particular through the multitude of intermediate target formulation templates, and as a result of the difference between the estimates made by the public compared to those of the central bank. Bernanke and Woodford (1997) analyze in particular whether the intermediate target is the population's expectations. They insist on the idea that, as it tends to balance, agents have less and less reason to keep themselves as informed. This makes their expectations more and more inaccurate and useless as information. Secondly, targeting forecasts does not lead to a balance in rational expectation hypothesis. The authors also state that the central bank would act better if it used information from various sources and would not tie monetary policy too closely to variables that depended largely on public expectations.

Another solution would be to adjust monetary policy in response to changes in financial market prices, excluding the interest rate (financial assets, bonds, futures, etc.). The third option is to target your own rate of inflation, as is the case in the UK or New Zealand.

The history of economic performance as a result of inflation targeting shows that, as a rule, central banks have succeeded in lowering inflation, together with an appreciable gain in their credibility,

only by applying transparency in its actions and by communicating permanently to the public. Regardless of the instruments selected under the inflation targeting regime, transmission channels and set objectives, the central bank must communicate with those who are ultimately affected by the purchasing power of the currency and ensure that its actions are understood as approved. By ensuring a high level of transparency at monetary policy level by explaining to the general public as much as possible the strategies and measures adopted and, last but not least, by taking responsibility for the measures adopted, the central bank may find it desirable to adopt inflation targeting as a monetary policy strategy.

Conclusions

In order to optimize monetary policy, the central bank of a particular state must take into account a complex set of aspects and factors that may affect the achievement of the objective proposed by the monetary authority. Studying theories associated with inflationary expectations have demonstrated their indispensable role, especially the increased importance of rational expectations in the current modern economy. International theory and practice has demonstrated that the channel of inflation expectations plays a decisive role in promoting an adequate monetary policy capable of delivering the proposed objectives such as price stability and medium-term sustainable economic growth.

Anchoring inflation expectations and effectively managing them is grounded in the process of communication, transparency and accountability of the monetary authority. International experience has demonstrated the importance of communication and transparency in reaching the inflation target.

Bibliography

Bernake, B., Woodford, M. 1997. Inflation Forecasts and Monetary Policy. NBER Working Paper Series

Clarida, R., Gali, J.& Gertler, M. (1999) The Science of Monetary Policy: A New Keynesian Perspective. Journal of Economic Literature, 37(4): 1661-1707.

Eichenbaum, M. (1997) Some Thoughts on Practical Stabilization Policy. The American Economic Review 87(2):236-239.

Hichs, J.R., Value and Capital: An Inquiry Into Some Fundamental Principles of Economic Theory, Oxford, Clarendon Press,1946, reprodus după Beaud, M.; Dostaler, G., op. cit., p 293

Muth, J.F., Rational expectation and the Theory of Price Movements, reprodus după Frisch, Helmut, https://pdfs.semanticscholar.org/492b/16a3b0d5e439b592515175374e7dc594888d.pdf

Roberts, John M. 1998. Inflation Expectations and the Transmission of Monetary Policy. Federal Reserve Board

Sargent, T. & Wallace, N. (1975) „Rational" expectations, the optimal monetary instrument and the optimal money supply rule. The Journal of Political Economy, 83(2):241-254.

Svensson, L., 1996. Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets, NBER Working Paper

Ticinschii D., Impactul anticipațiilor sociale asupra proceselor economice http://netess.ru/3sotsiologiya/14156-1-vliyanie-socialnih-ozhidaniy-process-inflyacii-rossii.php, p.28

TREATMEANT OF LARGE EXPOSURES REGIME IN MACROPRUDENTIAL APPROACH VS MICROPRUDENTIAL – THE REPUBLIC OF MOLDOVA EXAMPLE

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Abstract

Banking service market challenges managing compliance costs in the same time, and diversifying in front of the clients through innovation of products and services, which needs a higher level of analysis to be adequately compliant and to ensure a profitable and sustainable model of business.

Moreover, Moldovan credit institutions are facing a challenge in managing their balance sheets through the perspective of assets quality and rising incomes and with the consolidation of banking sector tendency, which induce the need of adaptation for all market players.

In this context, the demand for products with big values and risks from the clients are restricted by prudential norms are being ready to be adopted. For this reasons, this article aims to study how the norms regarding the treatment of large exposures limits the capacity of lending, and to gain bigger profits for small and medium banks, thus the regulations favor big banks and creating even a bigger disruption on a competitive market.

Keywords: Bank regulation, large exposures, credit risk

JEL classification: E58, G21, G28

Introduction

The banking sector from The Republic of Moldova recently passed through a local crisis, which ended with one billion US dollars' theft and the failure of three banks, one of them being a systemic important bank. One of the key lessons from this financial crisis is that, banks not all the time consistent measured, aggregated and controlled exposures towards one counterparty or a group of related persons in their balances and their operations, but the National Bank of Moldova didn't manage identify them at the right moment, when the losses were still possible to recover. From this reason, prudential supervisory norms where tightened, and treatment of large exposures came into supervision sight, generating the squeeze for small and medium bank lending activity.

During the history there were examples of banks failure due to concentration of exposures to a single party (for instance: Johnson Matthey Bankers from The Great Britain from 1984, Korean baking crisis from 1990). Regulation of large exposures were developed as an instrument to limit the maximum losses which can suffer a bank in case of a sudden failure of a counterparty, not affecting the banks solvability.

The necessity to estimate and to limit the volume of large exposures for the banks over their capital was recognized by the Basel Supervisory Committee. Especially, in 1991, Basel Committee revised the practices and issued a guide for supervising large exposures.

The regulating framework of large exposures fulfills the Basel Committee standards for capital adequacy for risks, because this is not specifically projected for protecting the banks from big losses which result from an instant counterparty failure. Especially, minimum capital (on Pillar 1) requirements of regulation Basel framework implicit assume that banks shall have a granular infinite portfolio, and mainly none of a concentration form is considered in computing capital requirements.

Contrary to this hypotheses, idiosyncratic risk due to large exposures towards counterparties can be present in banks portfolios. Although, the supervisory process (Pillar 2) adjusting concentration risk can be done by diminishing this risk, these adjustments are harmonized in different

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jurisdictions, and are projected to protect the bank against huge losses from the failure of a counterparty. For this reason, the Committee concluded that the framework for capital adequacy to risks is not enough for a total attenuation of micro prudential risk from large exposures which are reported to banks resources. This framework needs to be fulfilled with a simple framework for large exposures which will protect banks against dramatic losses caused by an instant failure of a counterparty or a group of related persons.

Macro Prudential Approach Versus Micro Prudential Approach in Risk Treatment

In Bank for International Settlements concept, macroprudential treatment of regulation and financial supervision have two important features. Firstly, this approach focuses on financial system overall and has the objective to limit the episodes of financial instability, whereas these can have negative consequences upon real economy (losses from PIB). The objective aims following to limit the possibility of collapse of an important part of the financial system and reducing the costs regarding risk diminishing. In the same time, because the system integrates separate elements, which have a strong relationship between them, it is necessary to follow all bank risks to identify the exposure impact for each of them upon the system overall.

Thus, it is considered that macro prudential approach is contrary with micro prudential approach, because the object of micro prudential approach is to limit the institutional risk failure (idiosyncratic risk), despite of its impact upon overall economy. In the other words, this objective aims to protect the customers (deponents). We consider, that the contrast between micro and macro prudential is wrong, these objectives have a unique genesis, they fulfill each other, because the macro prudential approach treats aggregate risks as being dependent from a collective behavior of financial institutions (partial endogenous), meaning the individual sum of risks.

At the same time, applying the instruments for macro prudential supervision without considering the micro prudential component is noxious for the banking sector, proved fact by regulating and supervising of large exposures. Actions taken at the overall level can have unwelcome results applied at the level of financial institution. For instance, it is rationally for an individual bank to strengthen its lending standards in a period of recession and these standards shall be adequate its capacity of losses absorption after exposure to various risk categories.

In case when common standards are developed, without taking into calculus banking system polarization, and all the banks will proceed uniform in their application, it can lead to a drastic limiting in lending, with a negative impact upon economic activity, which will lead to an additional deterioration of their loans portfolios (Crockett, 2000).

Also, the positive effect of applying macro prudential supervision is that about stability of financial system through some dimensions: (1) diversifying the risk among the system, and (2) evaluating risk in time. (Caruana, 2012). In frame of the first dimension *(„cross-sectional dimension")*, it is important to pay the attention to common exposures of financial institutions as an element of systemic risk. These common exposures can occur in case when institutions are closely interconnected or are exposed to the same risks. In case of close linkages among banks, due to important mutual exposures, problems of an individual bank can affect more banks or the system overall.

The second dimension, implies the risk evolution in time, it is related to the fact that systemic risk can be worsen by the interaction from financial system or through linkages between financial sector and real economy. These interactions amplify the movements of economic cycle (procyclicality) and can create financial instability. In the period of economic compassion, reducing the risk perceptions, increasing of leverage ratio, a high liquidity level on the market, increasing the assets prices, all these can lead to an artificial increasing in banking balance sheets, including large exposures. Banks following to obtain the profits on financial markets are losing in their vigilance and crowd their assets with risk elements, concentrated on a segment, on a debtor or an instrument. In recession periods, the process operates in other way, but excessively, generating the financial pressures.

The instruments of macro prudential policy that can be in this situation consist from establishing of contra cyclical capital buffers and a dynamic provisioning. Contra cyclical reserves of capital can be formed in favorable economic periods, over the necessary risk level, being used in contraction periods of economy to absorb financial pressures. With regarding to a dynamic provisioning, the principle which underlies this is that provisions are made in basis of some estimations of expected losses, which makes the balance sheets less sensible to economic cycle fluctuations.

For attenuating the systemic risk contagion, it is important that in frame of the macro prudential approach to be used micro prudential instruments calibrated in function of the institution importance in frame of the financial system. However, in this case unifying applied prudential instruments upon all elements from the system will led to a polarization of financial market from the competitiveness perspective and creating the imbalance on the segment of products offered to clients.

Large Exposures Treatment in the Republic of Moldova

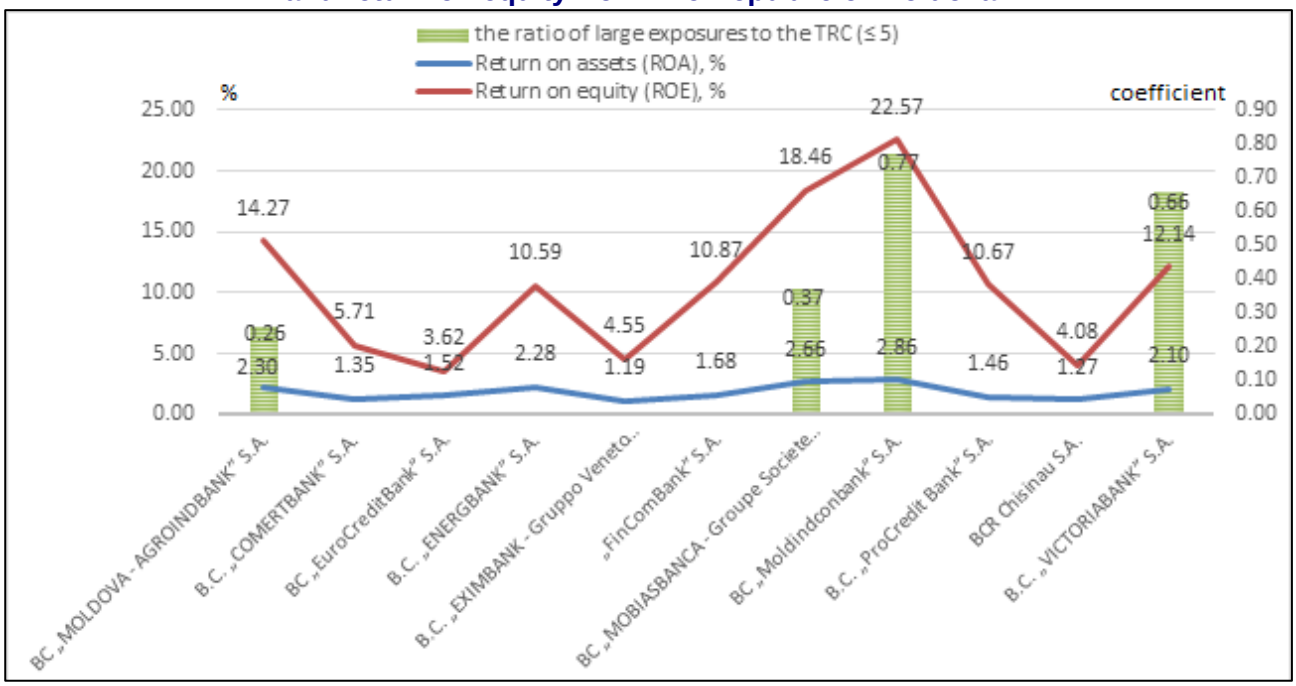
At the moment, in The Republic of Moldova the regime of large exposures is treated through the Regulation on “large” exposures of the National Bank of Moldova, which has the micro prudential approach. “Large” exposures are defined as “net exposure to a person or a group of related persons, amounting 10 percent or more from the total regulatory capital of the bank”.

According to this regulation, the bank can to assume a net exposure to a person or to a group of related persons not more than 15 percent from its total regulatory capital. In the same time, the sum of all net outstanding loans granted to ten persons, including groups of related persons, which are the first net loans debts minus all the provisions and conditional commitments, shall not exceed 30 percent from the total loan portfolio of a bank and its conditional commitments related to those 10 persons.

Applying of this limit led to polarization of Moldovan banking sector. Thus, from 11 active banks, only 4 banks are granting credits, which can be framed in normative limit of large exposures – these are the big 4 banks from the system.

This way the priority to big banks was created in granting investment loans, small banks have to explore the retail segment. However, in absolute amount, consumers credit segment is riskier and more expensive to follow than credits granted to a smaller group of debtors, but in a smaller value.

Figure 1 - Relationship between large exposures and banks return on assets and return on equity from The Republic of Moldova.



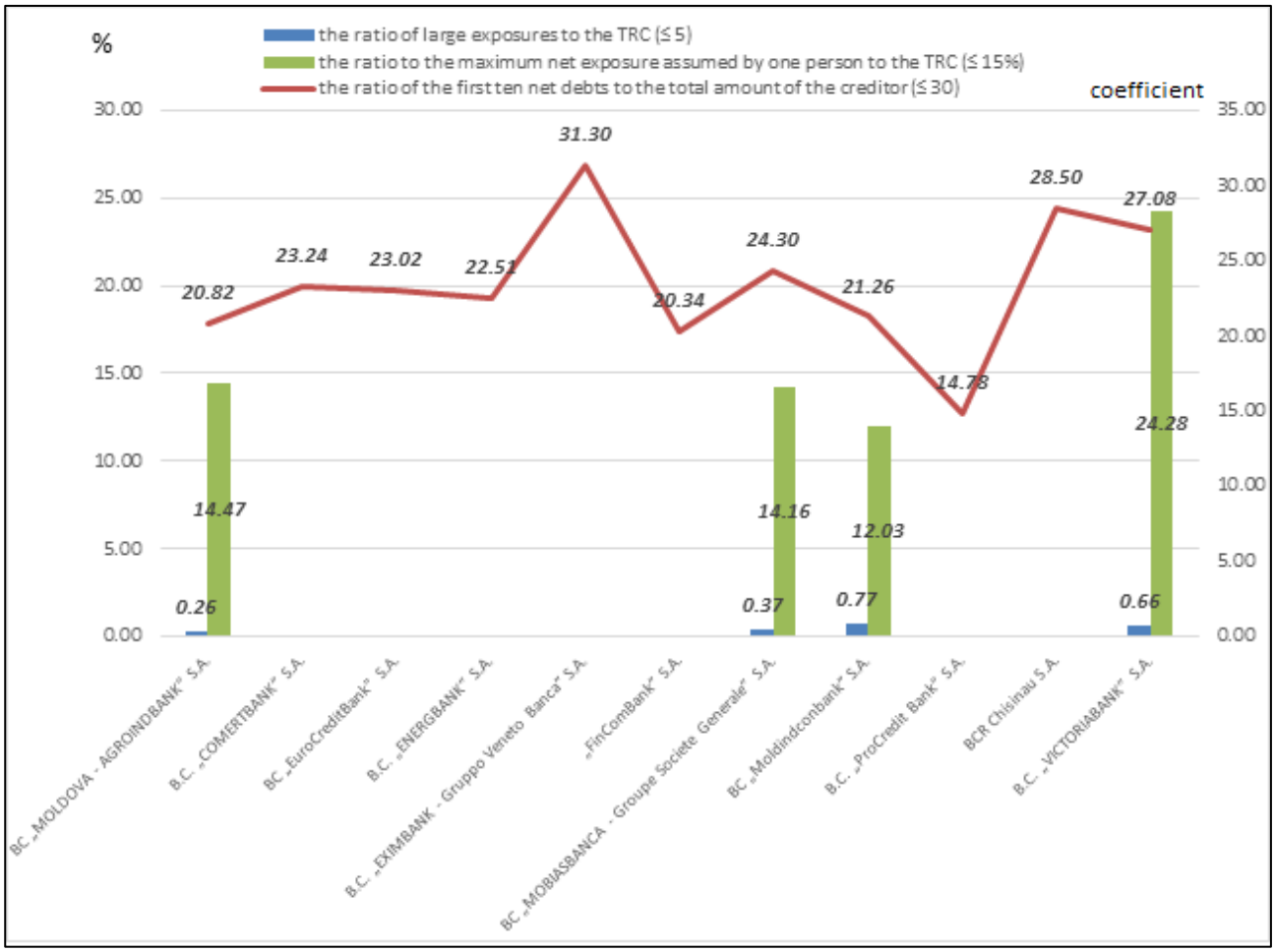
Source: Made by the authors in basis of data from http://www.bnm.org.

Market polarization of banking services due to limits of large exposures creates additional possibilities to gain profits for banks which practice loan granting in significant values. From the

figure nr.1 we can see a direct relation between the possibility of crediting of corporate clients and return on assets (ROA) and return on equity (ROE). For other banks this opportunity is unreachable, the created situation led to imbalance through potential debtors, forming a small group of big clients, which will be refused by small or medium banks in lending in order not to violate prudential limits.

In the same time, we can remark that maximum limits of large exposures were not reached by the banking system overall, even by the banks separately. Thus, a minimum threshold of 5 percent from TRC, large exposures on the system overall reached almost 0.22, but the most exposed bank registers 0.77 (figure 1). This fact is due to some rigid micro prudential requirements, which make those macro prudential requirements almost inapplicable.

Figure 2 - Framing of macro prudential limits of large exposures by banking system from The Republic of Moldova.



Source: made by the authors in basis of data from bnm.org.

Even in conditions of overregulation, The Republic of Moldova assumed the commitments to implement the new Basel III agreement, which comes with a macro prudential treatment of large exposures regime, meets some difficulties in their application.

In conformity with art. 395 of Regulation 575/2013 of European Union large exposures will be divided over eligible bank capital, after application of credit risk mitigation techniques, the banks cannot have an exposure to a client or a group of related persons which value exceeds 25 percent of its eligible capital. Additional to this, the new regulation framework will impose banks to make additional reserves of own funds for large exposures.

In the same time, if we analyze capital adequacy ratio, which shall be not less than 16 percent and it is regulated by the Regulation on capital adequacy ratio, on the sector overall, we can see that this indicator is twice bigger than the established normative.

In this context, application of respective norms will lead to an additional need of capital, which being randomly implied, could determine the diminishing of banks interest regarding loan granting,

representing a challenge for banking industry to make profits. This could lead to a constrain of exposures and changing of business model of banks, guiding banks to offer less risky services, without financing businesses in real economy. A sudden passing to new capital requirements (from Basel I to Basel III) in the first stage, highlights the necessity of bank system capitalization, being welcomed a gradual transition.

Conclusions

The maximum vulnerability at a negative market evolution in the short run is retrieved at the level of banks with a big level of nonperforming loans (NPL) in the total portfolio. Solving of these problems depends not on the regulators but on the initiatives of banking institutions. Thus, micro prudential approach, especially what comes from the inside of the bank has priority towards outside established limits. Banks are more competent in estimating of their own exposures, while a unique approach can lead to an insufficient risk capital, limiting to the main source of capital rising – profit.

A different approach of regulating systems shall be done in function of banking sector development. In many emerging markets, at the national level, inclusively in The Republic of Moldova, it is necessary a harmonization of regulatory framework regarding “large exposures”, which can allow a clear and objective classification of debtors (retail and corporates) firstly by their quality and them by their exposures dimensions. Because the risk of one persons or a group of related persons can be monitored with less expenses than a risk of multiple small loans, through application of diversifying approach of large exposures can be created premises for a better administration at the internal level.

Bibliography

Caruana, J. (May 8, 2012). Interconnectedness and the Importance of International Data-sharing. Lecture presented at the 3rd Swiss National Bank – International Monetary Fund Conference on the International Monetary System, Zürich.

Crockett, Andrew (2000), “Marrying the Micro- and Macro-prudential dimensions of Financial Stability,” remarks before the Eleventh International Conference of Banking Supervisors, September 20–21 (Basel)

Jian Cai, Anthony Saunders, Sascha Steffen. (2015). Syndication, Interconnectedness, and Systemic Risk. September 17, https://www.bis.org/events/confresearchnetwork1510/steffen_paper.pdf

Marrying the macroand microprudential dimensions of financial stability. (2001) BIS paper nr. 1, https://www.bis.org/publ/bppdf/bispap01.pdf

Park Yung Chul. (October,2006) A macroprudential approach to financial supervision and regulation: conceptual and operational issues. https://www.imf.org/external/np/seminars/eng/2006/macropr/pdf/YungChul.pdf

* * *, Regulation of “large” exposures. Approved by the Decision of the Council of Administration of the National Bank of Moldova no. 240 from December 9, 2013. Official Monitor of the Republic of Moldova no. 17-23/97from January 24, 2014. Available at: http://bnm.md/en/content/regulation-large-exposures-approved-dca-nbm-no-240-december-9-2013#art1.

* * *, Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012. Available at: http://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex%3A32013R0575.

* * *, Supervisory framework for measuring and controlling large exposures. Standards. Basel Committee on Banking Supervision. March 2013. https://www.bis.org/publ/bcbs246.pdf

FUTURE OF VIRTUAL CURRENCY

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Abstract

Virtual coins are deployments of the "crypto-coin" concept and operate by virtue of a distributed database, each transaction being validated via nodes connected without the need for a supervisor such as a central bank. Each participant has the opportunity to create new Bitcoin coins for the personal use of these coins, thus being rewarded for participating in the validation of other transactions in that virtual currency.

Bitcoin coins are not real money. It's like an online token that can be exchanged for goods and services in the places that accept it, just as someone gives someone a dollar because they bought something worth one dollar. But, unlike the dollar, which has series and number, Bitcoin - is an electronic record without registration number or other kind of mechanism that could be used to trace buyers or sellers.

Keywords: bitcoin, coin base, virtual currencies, XBT.

JEL classification: E4, E44, E52

Introduction - What is Bitcoin?

Bitcoin is a virtual currency built around a complicated cryptographic protocol and a global computer network that supervises and checks what coins have been spent by whom. Due to its anonymous character, bitcoin is a popular choice for illegal activities because it is extremely difficult to find out who uses Bitcoin.

Bitcoin appeared in 2009, being - after other authors - the creation of Satoshi Nakamoto, which can be both a name and a username. Bitcoin is "electronic cash, it's not real, it's just the bearer in our computers" (Andrei Andone, Romanian expert in bitcoin). Bitcoin it is a transfer between a real money seller and the bitcoin buyer, who can be the same person, with the help of a mediator, usually a trading platform (behind which is one or more specialists). To buy bitcoin, you can offer economic goods (commodities and services) or another currency - real, this time - in exchange, according to the parity of the day of the transaction. To sell bitcoin is similarly procedure.

Bitcoin is a so-called virtual currency, decentralized and secured by cryptography. All virtual bitcoin coins physically exist simultaneously on each user's computer (or the server used by him), but only bitcoin owners have access to them. Market capitalization, that is, the value of all current bitcoin coins at current quotation, is 15 billion dollars, investments in profile launches start-up have exceeded one billion dollars, and only the current consumption of the system is 170 MWh, similarly with the production of the current of medium-sized thermal power plant.

Bitcoin coins are not real money, they are obtained by completing missions (or equations) called "mining". In practice, users use their computers for the trading system, and in exchange for providing transaction processing power they are paid in bitcoin. Bitcoin can buy a range of goods and services from computer games, web services, jewelry, weapons or even cocaine, precisely because bitcoin does not have a registration number, so transactions are protected by anonymity.

Since 2014, the symbols used to represent Bitcoin are BTC, XBT. Small quantities of bitcoin used as alternative units are: millibitcoin (mBTC), microbitcoin (μBTC) and *satoshi* - called as a tribute to the creator bitcoin, a *satoshi* is the smallest amount of bitcoin, representing 0.000.000.01 bitcoins, 1/100.000 .000 of a bitcoin. A millibitcoin is equal to 0.001 bitcoins, which is a one thousands of bitcoin. A microbitcoin is equal to 0.000001 bitcoins, which is a millionth of bitcoin.

On October 7, 2014, the Bitcoin Foundation unveiled a plan to apply for a bitcoin ISO 4217 currency code, and referred to BTC and XBT as their preferred candidates.

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Building on the unsuccessful success of bitcoin, in the years 2016-2017, other electronic coins appeared:

a)On December 27, 2016, *Ether* - the virtual currency required to operate the Ethereum network, which was then 7.22 dollar on the Poloniex stock exchange; over four months, on May 7, 2017, the value of an ether was 986.76 dollar. Vitalik Buterin invented Ethereum, the main competitor of the bitcoin network at just 19 years of age; has 23 years now and is a millionaire given the nearly 500,000 of his own, according to his own statements;
b)*Monero* – is another virtual currency, which was on May 22, 2017 worth 31 dollar, is very far from 1 bitcoin, worth about 2,000 dollar. If, in the case of Bitcoin, any transaction can be tracked through its virtual catalog, Monero is evolving in this respect, and transactions can be anonym despite their public nature. Monero is, therefore, the preferred currency for hackers and in illegal transactions that take place in the “dark area” of the Internet, the so-called Dark Web;
c)*Ripple* is the third virtual currency as a value on the cryptographic market and is a payment protocol, currency exchange and a real-time settlement system.

Who is Craig Wright?

Australian contractor Craig Wright publicly acknowledged the bitcoin inventor, writes BBC. Wright also provided technical evidence to support his assertion that he was the "parent" bitcoin. Members of the Bitcoin community and development team have confirmed that it is he who invented one of the most controversial coins in the world.

Craig Wright has revealed his identity to the BBC, The Economist and GQ. After meeting with the BBC, Wright signed digital messages using cryptographic elements developed in Bitcoin's first internships, linked to the virtual currency and the "mind" behind it.

Craig Steven Wright is an IT specialist. He completed the Padua College in Brisbane (Australia) in 1987. He was a computer science professor and researcher at Charles Stuart University, where he also completed a second doctorate. He has worked in IT for several companies, such as OzEmail, K-Mart and the Australian Securities Exchange. He thought architecture for Lasseter Online's first online casino.

Wright was the CEO of Hotwire Preemptive Intelligence Group, which was planning to launch Denariuz Bank, the world's first Bitcoin bank, but faced problems with Australian regulators and abandoned the project. Wright is also the parent of DeMorgan, and Panopticrypt Cyber Security Company.

In 2015, Newsweek announced that he had "discovered" the creator of the virtual bitcoin coin in the person of a 64-year-old Japanese-American who lived near Los Angeles. Then the magazine said he found the mysterious "Satoshi Nakamoto," the person whose name is related to the creation of the coin.

"The discovery" turned out to be a false track, and Dorian Nakamoto (named Satoshi baptism) came to sue Newsweek after saying that his life was all over his head. In December 2015, a new publication, Wired magazine, claims that Satoshi Nakamoto is a pseudonym used by a 44-year-old Australian cryptologist named Craig Steven Wright: "Wright either invented the bitcoin, whether it is a shining fern who strongly wants to believe he is the inventor, "writes Andry Greenberg and Gwen Branwen. The Wired Magazine quotes surface documents that it claims to reveal talks between Wright and his lawyers, saying: "I've done my best to hide that I've been running Bitcoin since 2009."

Wright's blog was deactivated shortly after the Wired article, and its Twitter account was completely deleted. According to online profiles that remain online, Wright leads DeMorgan, a Sydney-based company that analyzes "alternative currencies."

Surfing documents and the fact that Wright holds a huge volume of bitcoin come to support what Wired magazine writes.

How Bitcoin Virtual Machine Works

Imagine the bank's safe-deposit box. Enter yourself and you have the key only from your box, which you know the number. You can open it and download it. But the value boxes also have a slot, like mailboxes, where you can enter content into anyone else's box. But you do not have the keys and you do not know who the owner is unless he told you. Each user can keep a copy of the entire vault with all the value boxes. Thus, all users can be present in the vault with value boxes, alone and simultaneously at the same time. Everything is so certain that nobody has ever managed to forge a key, break a box, or stick his hand through the slot. Instead, be careful, if your key is stolen, or you entrust it to someone who does not need it, the robbery becomes trivially easy. Even anonymity is not fully guaranteed - disclosure of identity for a single transaction can help identify all operations made from the same box. Rigorously meaningful is the bitcoin description as a pseudonym coin.

Actual coins are "mined", which anyone can theoretically do. Each bitcoin is earned by solving a cryptographic problem that requires large processing resources. The time and resources required to solve are perfectly predictable, but they are getting longer with each bitcoin already produced. It is an industrial business like any other - it costs equipment, wages and (very much) current. Sales are virtually guaranteed, with the risk being the price at which they will happen. Most bitcoins are now produced in China, three to four very large farms; up to now about 15-16 million bitcoins have been produced. In the current trading system, the maximum possible number of bitcoins is 21 million and will be reached in a few years if the current bit rate quote continues.

Trading Levels

In the short term, bitcoin also appreciated 16% in a single day, trading close to dollar 300 per unit hours after San Francisco's Coinbase announcement, which introduced the bitcoin virtual currency to the US market. But the lack of confidence of those who participated in making bitcoin transactions brought back its quote.

In August 2016, 1 bitcoin was trading at a rate of 233 dollar to change for 730 dollar on December 2, 2016, and the bitcoin market was available for 9 billion dollar worth of transactions. Against the backdrop of geopolitical instability, bitcoin has steadily advanced in recent months in 2016, reaching a level of 1,131.15 dollar on Jan. 5, 2017, near the record high of 1,141.16 dollar according to the Coindesk platform. Throughout 2016, the currency advanced by 122%. China and India have been major buyers.

So at the beginning of 2017, Bitcoin recorded trading at dollar 1,163 on the Bitstamp European exchange from the end of 2013. Then, on January 10, 2017, 1 bitcoin changed to 773 dollar for May 1917 to reach the maximum trading threshold of 1,900 dollars for 1 bitcoin, and on May 22, 2017 it exceeded the threshold of 2,000 dollar for 1 bitcoin to reach dollar 3,000 for 1 bitcoin in June 2017!

Theoretically, the bitcoin system allows 12.5 coins to be added to the system every 10 minutes. When Bitcoin reaches the maximum quotes - shown above - its total bitcoin value in the system is at a maximum of over dollar 16 billion, roughly equivalent to an average company, part of the UK FTSE 100 stock index.

In 2016, bitcoin was the best performing currency, outpacing 125% of all censuses of coins issued by central banks. Bitcoin has likely been boosted in the last year by increased demand in China amid a 7% Yuan annual devaluation in 2016, the worst performance of the Chinese currency in more than 20 years. According to the data, most of the bitcoin transactions are made in China.

Advantages of Virtual Coins

Virtual coins are a means to transfer money globally quickly and anonymously and are not subject to any authority, making it attractive for those who want to escape capital controls. Bitcoin is also attractive for those worried about a cash crisis such as India. "The increasingly tough war against cash and capital controls make the bitcoin currency a viable alternative, though risky," says Paul

Gordon of the UK Digital Currency Association, and co-founder of Quantave, a company that tries to facilitate institutional investors' access to virtual currency exchanges.

Virtual coins can be used to sell or buy services, products, or other currency by downloading an application to your mobile phone or computer. Here's an example: "There is no central site, but windows sites to the bitcoin world. The coin is just on the phone or computer in your own wallet. For example, I offer 700 dollar and receive 1 bitcoin in my wallet. Download an application on your phone and create a private key and wallet in your device's memory, "said an experienced user in the bitcoin transactions field. „I think it is an interesting alternative asset, especially as a means of protecting you against demonetization or other geopolitical factors," said David Moskowitz, CEO of Attores, a platform that uses blockchain technology to execute contracts.

The bitcoin was generally characterized by high volatility, and in 2015 and 2016 it gained more stability. Bitcoin popularity as an alternative asset for refugees is rising among investors because the virtual currency is considered to be less influenced by government regulation and monetary policy changes.

Disadvantages of Virtual Coins

The maximum total market capitalization of all bitcoin coins in circulation is about 16 billion dollars. But, compared with all other assets, especially gold, shares, real estate, 16 billion means very little. Although generally characterized by high volatility, the virtual currency has gained more stability over the past two years. The meteoric rise of bitcoin in recent months may be partly due to an imbalance between supply and demand, which may be mitigating in the future. The bitcoin currency has therefore been extremely volatile in its history so far, with transactions often being disturbed by hacking scandals on various platforms.

The production and trading of bitcoin virtual currency transactions implies a very high consumption of electricity resulting from the cryptographic algorithm processing on which this coin is based. One of Bitcoin's first deployments works with a distributed database, each transaction being validated via the connected nodes without the need for a supervisor such as a central bank. Moreover, each participant has the opportunity to create new Bitcoin coins for their personal use, thus being rewarded for participating in the validation of other virtual currency transactions. The recipe used has a disadvantage: the production and intermediation of transactions in the Bitcoin coin implies a very high consumption of electricity resulting from the cryptographic algorithm processing on which this coin is based.

If, at first, the problem of energy consumption was rather theoretical, as more and more individuals and businesses joined the effort to generate as many bitches as possible, energy consumption rose: in the most pessimistic scenario envisaged by Sebastian Deetman, the computing systems used to process Bitcoin transactions could reach, by 2020, an electricity consumption of more than 14 GW, equivalent to a modern European country, such as Denmark.

Despite currency claims, Bitcoin cannot be used because of the huge volatility. Even sites claiming to "accept" payments with Bitcoin actually have prices denominated in dollars, euros or other real currency, and only accept Bitcoin as a method of transferring funds at the current quotation. Transfer to Bitcoin is by far the cheapest of all - down to 0.0001 bitcoin, that is below 5 cents per transaction. Money collects all of the "miners", because also confirming transactions is a service that requires computing resources. The biggest use of Bitcoin - in the area of illegal transactions (drugs, weapons, etc.) on sites like Silk Road - is, in fact, a major drawback for Bitcoin.

Blockchain - Technology for Virtual Coins

Blockchain is comparable to the world of finance with what it was twenty years ago for the world of information: a technology that allows fast, secure and decentralized transactions. Bitcoin was the first Blockchain application.

Blockchain in the Vision of Some Central Banks

The Bank of England is exploring the possibility of introducing a coin called RSCoin, on which it has complete control and eliminates the need for commercial banks - clients would settle their transactions directly with central banks.

China's Central Bank wants to move to a digital version to help internationalize the Yuan, but still allow it to preserve monetary sovereignty.

The Central Bank of Russia will allow banks to use the blockchain to operate transactions between them. And the Central Depositary in Moscow wants to start an electronic voting system by blockchain.

The Central Bank of Australia made a block bill transaction simulation with 10 of the world's largest banks in early 2016.

Canadian Bank of Canada tests blockchain technology for a money transmission system.

The Central Bank of the Netherlands, a member of the Eurozone, mentions in the 2016 report the possibility of creating a parallel national currency based on bitcoin, to which he found a new name: DNBCoin.

The European Central Bank is of the opinion that Distributed Ledger Technology (the generic name for blockchain) is "panacea or straw fire".

The US Federal Reserve is "optimistic" about the blockchain and believes it will lead to the deepest transformation of the financial system of the 1970s of the last century.

Blockchain in the Vision of Commercial Banks

The 42 large commercial banks of the world formed in 2016 the R3 consortium, development and blockchain research. Among them are Goldman Sachs, JP Morgan, Citi, and Bank of America, Société Générale UBS, Credit Suisse, RBS, BNP Paribas, HSBC, Barclays, Nomura, Deutsche Bank, Société Générale, Unicredit, and ING.

Vice President Sberbank, the largest bank in Russia, predicts the disappearance of banks in just 10 years as a result of blockchain technology.

Billon is a regulated blockchain payment system, backed by a number of large Polish banks and set at one-to-one parity with the Polish zloty.

Blockchain in the Eyes of Card Issuers

Visa believes the potential of technology is still underestimated. He hired developers to develop a scalable version of the blockchain.

MasterCard is cautious in approaching, but not from inertia but because it does not want to be "blindsided", meaning to ignore any further potential technology with even greater potential.

Blockchain Seen by Technology Companies

Microsoft offers "Blockchain as a service" on the Azure cloud computing platform.

Intel has already published an experimental code from its research into the application of blockchain technology to the so-called "Internet of things".

Amazon prepares to include blockchain in the giant machine of the AWS application suite, precisely to "disrupt financial services."

IBM builds a blockchain-based payment system to sell to banks.

Blockchain Electronic Settlement System

Blockchain is the technology that makes it possible to operate the Vault Vault described above - an algorithm that allows the encryption of public key transactions, access to them with private keys, and the public distribution of the entire resulting log. In traditional finance, an important transaction is settled through the escrow account: the money is held by a third party. However, the escrow account has substantial costs because it requires highly qualified human supervision, so it is only used for large transactions and important contracts. With the help of blockchain, the escrow function can be programmed into the payee itself, so the actual transfer is only made when the algorithm finds objective (but also observable online, which is an important limit at this time). In this case, the electronic money leaves bankers, accountants and lawyers in a single shot.

Blockchain technology provides an easy way for banks to make payments directly to each other. Equally well, Blockchain technology may be the factor that will neutralize the dominance of US administration in the global financial sector, and some analysts believe that this seems to happen as quickly.

On Aug. 24, 2016, four of the world's largest banks announced they will join in creating a new financial solution protocol built on Blockchain technology: Deutsche Bank in Germany, UBS in Switzerland, Santander in Spain and Bank of New York Mellon joined forces to launch a new coin called Coin Utility Settlement. Like Ripple, Setl, Monetas and other rival technologies, Utility Settlement Coin could end the US banking system's dependence on cross-border payments and transactions. Banks will be able to make payments to each other in a direct way without passing through US money.

The total costs of clearing and settlement of international financial transactions are estimated at 65-80 billion dollars a year, according to a report published in 2016 by Oliver Wyman, a global consultancy firm. This has enormous implications, especially for American banks. For example, the Federal Reserve has already warned that financial technology could pose stability risks for the US financial system.

The Trading Network

The Bitcoin network has a 30,000 times more power than the world's top 500 supercomputers, $ 200 million worth of equipment, and 100 million dollars in day-to-day transaction security, ZF said Andrei Andone, founder of StartHash: "To take control of the network, someone should practically invest $ 200 million in equipment and spend $ 1 million a day on energy consumed. Bitcoin spends each day to secure himself so the money is not faked or stolen. "

There is a public register that records the bitcoin virtual currency transactions. Transactions in the form of the payer X sends Y bitcoins to the payee Z are running on this network with easily accessible software applications. Network nodes can validate transactions, add them to their copy from the registry, and then send these additions to the registry of other nodes. The block chain is a distributed database to independently verify the property chain of each bit hole, and each network node stores its own copy of the block chain. Approximately six times per hour, a new group of accepted block transactions is created, added to the block chain and quickly published to all nodes. This allows the bitcoin network software to determine when a certain amount of bitcoin has been spent, this being necessary to prevent double expenses in a non-centrally supervised environment. Since a conventional register records real banknote transfers or promissory notes that exist besides it, the block chain is the only place where bitcoins can be said to be in the form of unspent transactions.

The property right associated with bitcoin money assumes that a user can spend bitcoins associated with a specific address. For this, a payer must digitally sign the transaction using the appropriate private key. Without knowing the private key, the transaction cannot be signed, and bitcounters cannot be spent. The network checks the signature using the public key. If the private key is lost, the bitcoin network will not recognize any other proof of ownership; the coins thus become unusable and are actually lost. For example, in 2013, a user said he lost 7,500 bitcoins worth 7.5 million dollars when he dropped a hard drive containing his private key.

A transaction must have one or more entries. For the transaction to be valid, each entry must be an uncompleted output of an earlier transaction. Each entry must be digitally signed. Using multiple entries corresponds to the use of multiple currencies in a cash transaction. A transaction may also have multiple exits, thus allowing for more payments.

To send money to a bit-bit address, users can click on the links to the web pages; this is done with a bitcoin temporary URI scheme using a template recorded with IANA. Bitcoin customers, like Electrum and Armory, support bitcoin URIs. Mobile customers recognize bitcoin URIs in QR codes, so the user does not need to manually enter the bitcoin address and quantity. The QR code is generated by user input data based on the payment amount. The QR code is displayed on the screen of your mobile device and can be scanned by a second mobile device.

Bibliography

Bouri, E., Gupta, R., Lau, C. K. M., Roubaud, D., & Wang, S. (2017). Bitcoin and Global Financial Stress: A Copula-Based Approach to Dependence and Causality-in-Quantiles (No. 201750)

Eyal, I., Gencer, A. E., Sirer, E. G., & Van Renesse, R. (2016, March). Bitcoin-NG: A Scalable Blockchain Protocol. In NSDI, pp. 45-59

Karame, G. O., & Androulaki, E. (2016). Bitcoin and Blockchain Security. Artech House, pp 35 -39

Li, X., & Wang, C. A. (2017). The technology and economic determinants of cryptocurrency exchange rates: The case of Bitcoin. Decision Support Systems, 95, 49-60.

Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction. Princeton University Press, pp 66-70

Tapscott, D., & Tapscott, A. (2016). Blockchain Revolution: How the technology behind Bitcoin is changing money, business, and the world. Penguin, pp 86 - 92

Tschorsch, F., & Scheuermann, B. (2016). Bitcoin and beyond: A technical survey on decentralized digital currencies. IEEE Communications Surveys & Tutorials, 18(3), 2084-2123.

FINANCIAL CRISES IN REPUBLIC OF MOLDOVA: ESSENCE, PARTICULARITIES AND WAYS OF PREVENTION

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Abstract

Financial crisis is a sharp change in value of any financial instruments and, essentially, it is an important deadlock in functioning of financial market. It can be expressed through deep frustration of the financial system, accompanied by inflation, non-payments, dysfunction of banking system, instability in exchange rates, equity prices, substantial problems with internal and external public debt serving. There have been five financial crises in Republic of Moldova. Conducted studies show triggering factors, allow examination of their specific aspects, spreading channels and related consequences. Major fluctuations on foreign exchange market, functioning issues of banking system, public debt management and moral hazard remain important risk factors, which can cause financial market instability. It is also of major importance to determine the ways to prevent future financial crises.

Keywords: financial crisis, debt crisis, stock market crisis, currency crisis, banking crisis

JEL classification: G01, G18, G21

Introduction

In a direct sense, financial crisis is a situation where demand for money is greater than money supply (available), but in general sense this is a substantial disruption in functioning of financial market manifested by rapid loss of liquidity, problems related to cessation of banking institutions' functions, inconsistencies in budget revenues and expenditures, instability and fall of exchange rate, significant decrease in the volume of stock exchange transactions, mutual non-payment of economic agents, the lack of confidence in financial system, resulting in a rapid decrease in the value of financial institutions and / or assets.

Description of the Problem

As a relatively young state, Republic of Moldova during the period 1991-2015 suffered 5 financial crises of different nature:

- 1991-1993 - economic and financial crisis;
- 1998 - currency crisis;
- 2002 - external debt crisis;
- 2009 - financial crisis as a result of international financial crisis 2007-2009;
- 2014-2015 - banking and currency crisis.

However, problems of financial crises in Republic of Moldova are studied very little, the results of the study being very useful for taking measures to avoid financial collapse in the future.

Methodology and Data Sources

In order to conduct the research on financial crises in Republic of Moldova, information from official information sources, public institutions' reports, as well as opinions, results of analysis carried out by local experts were studied. Also, the wider analysis of context of triggering each financial collapse was carried out. Financial crises were precisely outlined, were determined causes of

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triggering, their consequences and created opportunities. As a result, an integrated dynamic image was created, which allowed conclusions to be drawn on specific national aspects of financial crises and formulation of recommendations for existing problems solving.

Results Obtained

Conducted research allows to describe the financial crises in the Republic of Moldova as well as the analysis of the triggering factors and their consequences.

The first economic and financial crisis in Republic of Moldova took place between 1991 and 1993.

The economic crisis in Republic of Moldova came from economic recession process in USSR and was aggravated by (Экономический …, n.d.):

- The shock caused by the breakdown of economic relations between former USSR.
- The process of price and tariff liberalization and internal market protection was launched in 1991, which simply led to a "price boom", with the old price system creating large distortions in economy.
- The internal armed conflict, which resulted in destruction of economic and social relations within the country.

In 1992, the authorities were more concerned with the issue of coupons, while country lost, according to estimates, about 1 billion of US dollars annually on account of inflation. These together with the delay in monetary reform and issuance of national currency on 29 November 1993 led to enormous inflation rates: 1669.6% in 1992 and 2705.7% in 1993. (*Inflația*…, *n.d.*)

Hyperinflation and economic crisis in the country (largely manifested by the massive lack of payments to meet debt in real sector of economy) led to serious problems in banking sector, requiring more than 300% to raise the cost of credit resources.

Thus, the refinancing rate of National Bank of Moldova in February 1994 reached 377%. (Radziwill, Scerbatchi, Zaman, 1999) In some cases, bank credits were even higher than 400%.

Similarly, by changing Moldovan Lei on Soviet rubles and Moldovan coupons in the amount of 1000 rubles to 1 Moldovan leu, the value deposited by population on deposit accounts with Banca de Economii and invested in the USSR's state bonds declined.

Along with this, in late 1993 and early 1994 there was the possibility of placing bank deposit interest with rates over 200%.

During the period 1992-1994, due to the crisis, there were the following opportunities to invest in Government bonds issued in paper via the Savings Bank with a relatively high profitability. (Luchian, 2003)

In 1995, it began issuing in book-entry form of Certificates of State (financial bills of Ministry of Finance with the term of 91 days) whose average return was 43.7%. (Luchian, 2003)

Regarding to which economy has been affected by crisis the level in 1990 is not restored to the present.

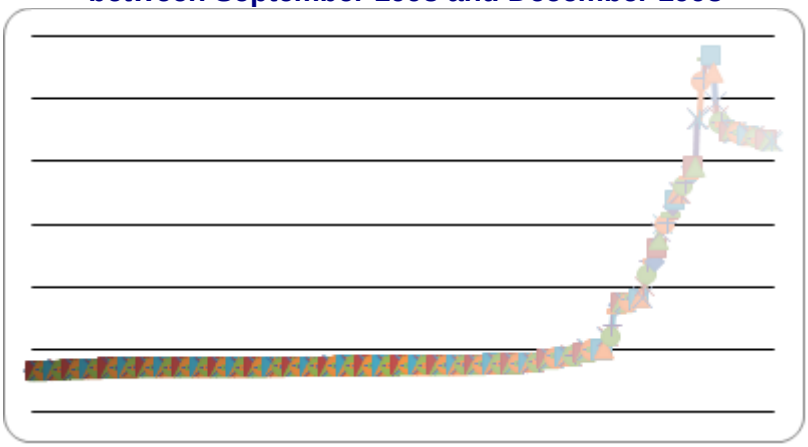
The second crisis triggered in 1998 was of a foreign currency nature under the influence of contagion effect of financial crisis in Russia, main cause of which was the loss of confidence of financial investors, preceded by the Russian Government's loss of capacity to honor obligations for state securities (SS) and danger increase of collapse and devaluation.

In addition to these causes, there has also been the structural weakness of banking sector in Russia, cost of assets diminishing on stock exchange, reduction of export earnings of petroleum products, as well as the risk increase on world financial markets followed by the dramatic collapse of very dynamic Asian countries crisis.

Republic of Moldova has resisted the financial turmoil in neighboring countries, yet it is unable to meet requirements imposed by international financial institutions and bilateral donors in order to

obtain the necessary assistance, giving way to pressure on the current account of Balance of Payments and the Moldovan leu depreciated strongly. (Figure 1)

Figure 1 - Dynamics of Moldovan leu against US dollar between September 1998 and December 1998

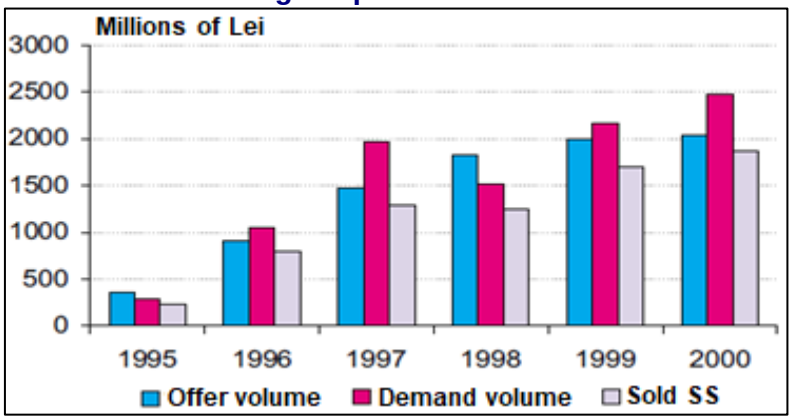


Source: elaborated by author

In the mentioned period, exchange rate increased from 4.78 MDL for one US dollar (01.09.1998) to 9.70 MDL / USD (01.12.1998), ie 2.03 times.

The crisis was largely due to a loss of confidence in SS in August 1998 following the deterioration of economic climate, resulting in mass withdrawal of foreign investors on SS market, which held 16.0% of SSs placed in 1998. This launched the process of reducing demand for SS (Figure 2).

Figure 2 - Dynamics of supply, demand and sales volume on primary market of SS during the period 1995-2000



Source: elaborated by author

Thus, SS demand decreased in the period 1997-1997 by 452.9 million lei or 23.1%, which led to decrease in SS volume placed with 31.5 million lei or 2.5%. At the same time, profit rates at SS in 1998 increased by 5.7 percentage points compared to 1997, accounting for 29.0%, and in 1999 - 28.5%. As a result of financial crisis, interest rates on bank deposits increased, which in January 1999 constituted an average of 30.0%. (*Raportul anual (a)...,n.d.*)

Also, as a result of crisis, prices for real estate dropped sharply and in the period 1999-2000 the lowest values were recorded since then.

In 2002, the foreign debt crisis took place in Republic of Moldova, which demonstrated the absolutely irresponsible behavior of the country's central government, including Ministry of Finance) to efficiently manage state debt.

In 1997 Republic of Moldova issued bonds on international financial market in the amount of $75 million with the interest rate of 9.87%. Maturity of these bonds was 13 June 2002, the date when they were to be redeemed by Moldova on international financial market.

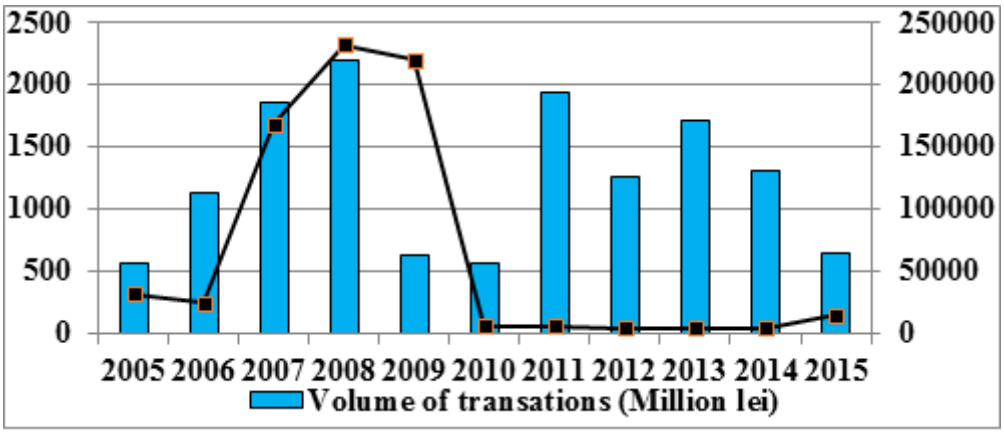
At the same time, in order to reduce expenditures for servicing of external state debt in 2002, Ministry of Finance performed several repurchase transactions with a discount of Eurobonds on secondary market during 2001, thus reducing the basic amount to $39,865 million.

Due to difficult financial situation of Republic of Moldova and to fact that in 2002 the volume of expenditures for external state debt servicing would reach the climax, ie 24.5% of basic state budget revenues and 3.6% of GDP, Republic of Moldova initiated a process of negotiations for restructuring of Eurobonds. Thus, following negotiations between Moldovan authorities and Eurobonders, the acceptance of the latter was obtained for restructuring of Eurobonds remaining in circulation until 2009. That said, investors gained an investment opportunity for a 7-year term at a rate of LIBOR interest + 4.625 basis points, which at that time constituted was applied at about 6.8%, ie lower than initial rate offered but relatively high for the international capital market. (Moldova urmează…, n.d.), (Moldova restructures…, n.d.)

It is interesting to note that, as a result of negotiations with external creditors, delegated persons from the Republic of Moldova, whose responsibility was not to admit the debt crisis, they were not penalized, but instead received state decorations.

In 2009 Republic of Moldova was affected by the international financial crisis of 2007-2009, which was manifested firstly on stock market by non-uniform dynamics of the volume and number of transactions on secondary market of corporate securities (shares) (Figure 3).

Figure 3 - Dynamics of transactions on secondary market of shares during the period 2007-2011



Source: elaborated by author

Thus, a significant decrease of both indicators took place in 2009, continuing in 2010, respectively 219.8 and 5.7 thousand transactions in volumes of 621.9 and 559.1 million lei.

Although Moldovan stock market is not connected with international financial markets, there are several mechanisms through which the effects of the crisis have been transmitted to Moldovan Stock Exchange. Among them, the main ones are (*EVM-COMPOSITE..., n.d.*):

- *Foreign portfolio investors leaving market.* Given that situation on core markets is difficult for them, most investors have stopped investing in high-risk markets (such as Moldova) or even withdrawn their investments from these markets.
- *The drastic decrease neighboring stock markets* of some qualitative parameters widely used by investors to determine stock prices of companies operating in the same sector of activity on several stock exchanges favored a decrease in prices of similar shares in Republic of Moldova.
- *Local investors have little resources.* Most local investors obtained resources to buy securities from some economic activities that were basis for them. With the evolution of crisis and worsening economic situation in most domestic companies due to reduced exports and reduced consumption, less financial resources are available for investment.
- *Most investors had pessimistic expectations.* Investors preferred to wait until general economic situation improved and abstained until then to make additional investments. This attitude was accentuated by the insolvency and liquidation of Investprivatbank.

The international financial crisis has also influenced the SS market. Thus, in 2008, SS demand decreased by 195.3 million lei or by 4.3% and the volume of SS placed decreased by 240.5 million lei or by 8.8%.

In 2009, there were opposite processes: the demand increased by 4916.1 million lei or by 112.4% and the sales of the SS - respectively by 2700 million lei or by 103.7%.

In 2008-2009, from February 2008 to April 2009 the SS yield to maturity gradually increased from 15.35% to 23.99%, after which occurred a gradual reduction to 4.51%.

Similarly, the international financial crisis of 2007-2009 has also caused bad repercussions on banking sector of Republic of Moldova and the vulnerability of banking sector in 2009 was determined by following causes (Iaţco, 2010):

- *Credit risk or deterioration in bank asset quality.* The share of non performing loans in total loans increased by 10.4 percentage points compared to the beginning of year and climbed to 16.3% towards the end of year. The need to cover potential losses from bad loans led to an increase in share of credit losses for loans in total portfolio by 4.7 pp to 9.7% at the end of year.
- *Partial withdrawal of deposits from banks, which led to liquidity risk.* Deposits decreased by 2.9% to 26,416.5 million lei, including deposits of individuals - by 3.7% to 16,465.8 million lei. Deposits of legal entities increased by 4.9% to 8,011.8 million lei.
- *Decrease of profitability as a result of decrease of banks' incomes.* In 2009, the banking system recorded losses of 145.5 million lei (11.4 million US dollars), the return on assets and share capital had negative values at the end of year: -0.4% respectively, - 2.1%.
- *Low access of domestic banks to international financial markets.* During 2009, banks were more cautious and more reserved to take credit risks, given the limited activity of economic agents. Banks have revised their policies to a certain extent in order to minimize their consumer credit risk. Thus, the balance of consumer loans granted up to 700 thousand lei decreasing by 35.3% compared to the beginning of year to 1 656.9 million lei. The balance of loans to small and medium-sized enterprises amounted to 7 540.9 million lei at the end of 2009, decreasing by 16.8% compared to the beginning of year.

On June 19, 2009, the NBM withdrew its license from Investprivatbank, as in supervised activity of Investprivatbank on the basis of financial reports NBM detected breaches of prudential rules, leading to a complex control in March-May 2009.

Consequently, inappropriate management of Investprivatbank led to the bank's insolvency. NBM explained the bankruptcy of Investprivatbank in that bank's administration presented erroneous reports about its liquidity status. One of the biggest mistakes of Investprivatbank was the focus on lending to real estate projects and non-diversification of loan portfolio, though real estate market has declined as a result of global crisis. Thus, as a result of NBM control, it was found that real estate loans accounted for about 75% of portfolio, while the admitted limit was no more than 30%. Another violation was that bank attracted short-term deposits on market but granted long-term loans.

The period of 2014-2015 was triggered by the beginning of two financial crises.

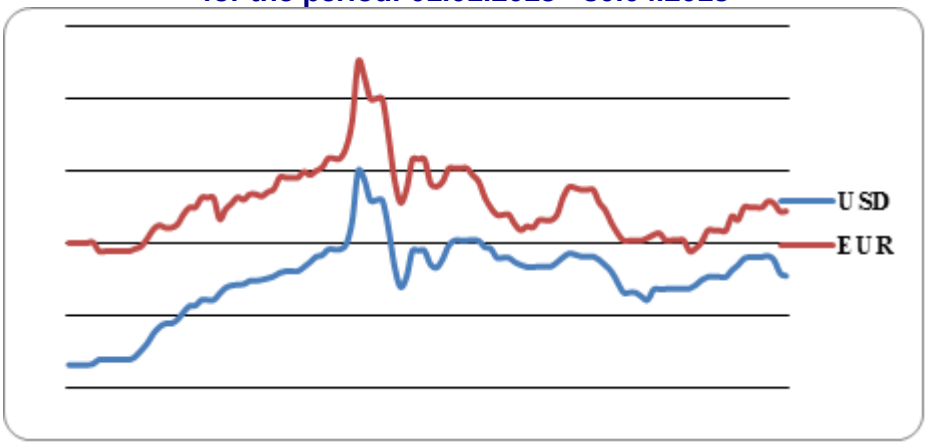
The dynamics of USD and Euro exchange rates in the first months of 2015 are shown in Figure 4, which gives the possibility to see the occurrence of a *currency crisis* in Republic of Moldova manifested by strong depreciation of the Moldovan leu started due to more circumstances in the middle of January ending in mid-February 2015.

Consequently, from the beginning of 2015 until February 18 (the day of maximum depreciation), MDL depreciated significantly compared to main reference currencies: 34% against the USD and 26% against Euro. In addition, it also weakened against Russian ruble by 22%.

In order to stop the currency crisis, in February 2015, National Bank of Moldova intervened on the market by selling 87 million dollars.

The synthesis of expert opinion allows to talk about the causes of currency crisis:

Figure 4 - Evolution of exchange rates of MDL against the USD and EUR for the period: 01.01.2015 - 30.04.2015



Source: elaborated by author

- From a technical point of view, there occurred an imbalance between demand and supply on foreign exchange market. Thus, on cash foreign exchange market the volume of currency bought by banks decreased by 7.1% and increase in demand led to an increase in the volume of currency sold by 48.6%. At the same time, this imbalance is much higher on interbank foreign exchange market: in February 2015 banks bought foreign currency in the amount of USD 138.5 million and sold 13.8 million USD. And the intra-banking market was in bulk: purchases of 153.9 million USD and sales of 312.7 million USD.
- The 20% decrease in money transfers from abroad in the fourth quarter of 2014 compared to the same period last year.
- Decline in exports (-3.7%) in 2014, while imports far exceed country's exports, leading to a trade imbalance.
- The economic situation in Russia, as well as embargoes imposed by this country on Moldovan agricultural products.
- The NBM's reaction to the increase in risk of deteriorating inflation expectations was a firm one, consisting of the following.
- The base rate was increased from 6.50% to 19.50%.
- The reserve requirement for attracted funds in lei was changed from 14 to 18 percent.
- *The bank crisis in the Republic of Moldova* can be analyzed further.

As a result of a series of suspicious operations, a huge capital hole was created in the financial sector, largely due to the bankruptcy of Banca de Economii, Banca Sociala and Unibank.

By dubious transactions in banking sector virtually "disappeared" money in foreign currency. This is evidenced by special foreign exchange interventions carried out by NBM directly in favor of three banks between December 2014 and February 2015. Thus, NBM made special interventions in the form of foreign currency sales with Banca de Economii, Banca Sociala and Unibank in December 2014 (221 million USD, of which 167.1 million USD were destined to close foreign currency swaps previously opened) in January 2015 (4.1 million USD) and in February 2015 (6.8 million USD).

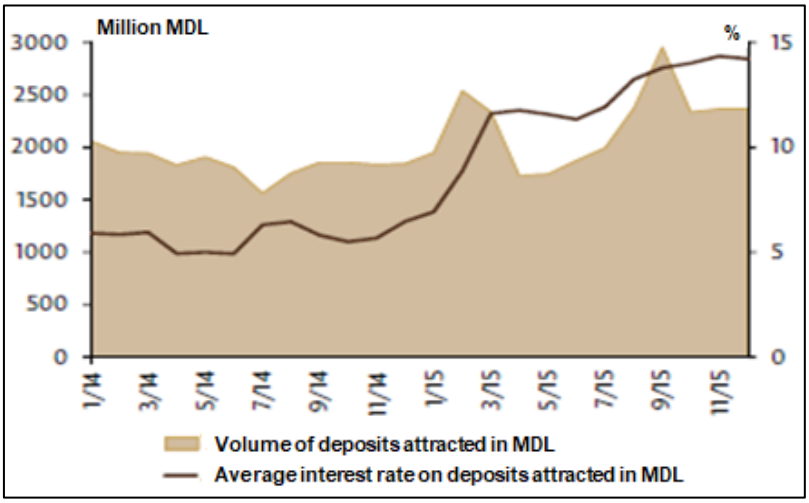
The tightening of monetary policy launched in December 2014 has led to a certain increase in interest rates on bank loans. In February 2015 compared to November 2014 the interest rates on credits in MDL increased by 2.1 pp.

Against the backdrop of economic uncertainties, rising interest rate levels and a decline in activity of banks under special administration, the volume of loans granted declined. Following the "anomalous outburst" of November 2014 lending, between December 2014 and February 2015, the volume of new loans granted declined by 16.2% compared to the previous year, although this decline moderated: in November 2014 the decrease was -40.9 % compared to previous year, while in February 2015 the decrease was -5.6%.

Depreciation of MDL caused a redistribution of deposits in favor of foreign currency deposits. During the period December 2013 - February 2015, cheaper Moldovan leu currencies increased foreign currency deposits, while the balance of deposits in lei diminished.

The lack of liquidity in domestic banks caused the increase of interest rates on deposits attracted in MDL (Figure 5).

Figure 5 - Dynamics of the volume and of average rates on term deposits attracted in MDL



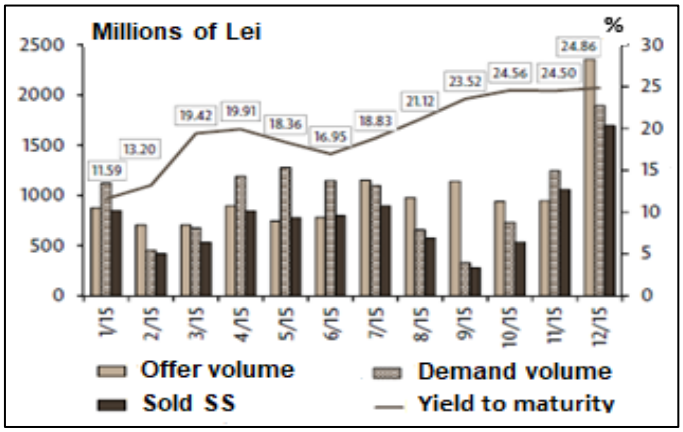
Source: elaborated by author

Thus, the average interest rate on deposits in MDL increased to a maximum of 14.6 percent (November 2015), above that of December 2014, 2.2 times. The average weighted interest rate of deposits attracted in MDL in 2015 constituted 12.1% per year, above the 2014 rate of 2.1 times.

In December 2015 a critical situation was created on the Moldovan capital market. The volume of corporate securities transactions declined dramatically, down 70 percent from the previous year.

Similarly, the evolution of the SS market should be noted in 2015 (Figure 6).

Figure 6 - Monthly dynamics of SS primary market indicators



Source: elaborated by author

Since January, the yield to maturity of SS has risen from 11.59% to 24.9% in December, when the surge in resource requirements led Ministry of Finance to issue one of the highest volumes of securities of this year.

The analysis of yield to maturity of SS divisided by terms of maturity reveals increased volatility, but the gap between them decreased in first decade of March, preserving this trend by the end of year. At latest SS tender placements in 2015, the average nominal yield to maturity recorded rates of 24.1, 24.8 and 26.5 percent annually for maturities at 91, 182 and 364 days respectively, being well above values recorded at end of 2014.

However, the magnitude of these increases was different from the maturity analysis: the most significant increase was recorded on SS interest rate with a maturity of 91 days (more than 4 times), while the average SS rates with maturity at 182 and 364 days doubled.

Conclusions

The main conclusion of study is recognition of possibility of a financial crisis in Republic of Moldova in the future, given the fact that following factors are preserved:

- Main areas where the financial crisis can be triggered remain banking system, foreign exchange market and state securities market.
- So far, the pronounced vulnerability of decision-making in banking system to various obscure interests (the phenomenon of catching state institutions openly discussed both by community of experts and some development partners and even members of Government and Parliament).
- Similarly, it is remarkable the profound level of politicization of state institutions and violation of fundamental principle of separation of powers in the state (including the abuse of responsibility for legislative packages on part of the Government, interferences in the functioning of judiciary, etc.).
- The behavior of foreign investors (their excessive mobility) remains a risk factor for financial crisis triggering. However, the domestic capital market, remaining in undeveloped state, is a weak channel for transmission of financial shocks to other segments of financial market and economy.
- Considering consequences of banking system degradation process and relatively high level of concentration on banking market, important systemic banks remain the "weak link" of banking stability system.
- Mechanisms for promotion and confirmation of bank administrators remain non-transparent and do not always allow the trusting of those capable, competent and dignified.
- The level of integration of banking supervision system into global one is very low, which so far allows domestic commercial banks to engage in illegal financial schemes (especially money laundering), which remains a financial destabilizing factor.
- So far, the issue of moral hazard in the work of commercial bank representatives and supervisors remains important, finding irresponsible activity of those guilty of triggering financial crises largely unpredictable.
- In order to solve problems related to financial crisis, authorities are willing to use administrative methods and attempts to use market leverage have often been less effective.
- The local economy remains in a state of latent economic crisis, although formally central Moldovan authorities report about a certain economic growth, which determines the permanent dependence in solving the financial problems of the state in foreign financing in different forms.
- To prevent further financial crises, experts propose the following measures (Negruţa, Lupuşor, 2015)
- *The revision of the concept of real independence of the National Bank of Moldova* that needs to be addressed in a multidimensional way. Firstly, it is about eliminating possibilities of certain circles of political or private interests to put pressure on central bank. Secondly, it is necessary to limit the ability of courts of any level to block decisions of NBM. Thirdly, it is necessary for NBM to be accountable for the annual performance evaluation of an institution by an independent entity, possibly outside the country.
- *The continuously strengthening of banking supervision monitoring.* In this context, it would be welcomed to streamline communication and coordination between institutions directly or indirectly responsible for financial stability. It is necessary to take complex measures to strengthen the professional integrity of NBM staff, to diminish the human factor in monitoring and regulation process by implementing IT solutions and to increase the capacity of NBM to identify and counteract concerted activities. It would also be useful to tighten criminal sanctions for market abuse and other commercial bank infringements.

- *The elimination of legal possibilities through which commercial banks interact with companies in risky or less credible jurisdictions, including offshore areas.* It's about prohibition of any interaction between banks and companies in regions that do not comply with transparency standards and full harmonization of domestic legislation with the EU's money laundering provisions. In particular, it is necessary to prohibit the purchase of banking shares by offshore companies, pledging bank shares for loans from offshore companies or transferring credit portfolios to offshore companies.
- *The completion of investigation into theft of banking sector, attracting and involving specialized experts and international companies*. It is also necessary to continue to investigate the involvement of decision-makers in state institutions and regulators (National Bank of Moldova and National Commission for Financial Market) in the devaluation of state (lack of reaction, delayed reaction, illegal and inappropriate legal, economic and financial decisions) on theft of assets in banking system. It is also necessary to ensure the maximum transparency of this process, as well as resignation and accountability of decision-makers responsible for banking sector supervision.
- *Increasing the transparency of shareholders in banking system.* It is necessary to improve the mechanisms for checking and investigating shareholder structure in banking sector starting with 1% of held shares. It is also appropriate to identify all final beneficiaries and eliminate risks of concentration of bank capital in the hands of one or more groups of final beneficiaries. Similarly, it is necessary to establish a clear mechanism for assessing the "quality" of shareholders in order not to allow the holding of bank shares by persons with a dubious integrity profile. In this respect, the actions should aim at implementing and institutionalizing the fit-and-proper test (minimum standards of integrity and transparency) and facilitating the exchange of information with resident countries of final shareholders of the banks.
- *Make responsible bank managers.* This is the implementation of bail-in mechanism, in which shareholders are under the obligation to cover from their sources losses and any other consequences of maladministration. It is necessary ti increase the independence of members of Boards, which verify the activity of bank managers, tightening sanctions for improper bank management.
- *Expanding the ability of commercial banks to absorb losses.* In this context, it is necessary to establish tougher requirements for important systemic banks. It is also necessary to continuously increase the requirements to minimum capital required to eliminate financial fragility of small banks and to gradually increase bank deposit guarantee ceiling.

Bibliography

Iaţco Stela (2010) Dumitru Ursu, preşedintele Asociaţiei Băncilor din Moldova: „Sistemul bancar a înregistrat pierderi de 11,4 milioane de dolari în 2009”, http://www.eco.md, [Accessed July 17th 2017]

Luchian, Ivan (2003). Gestiunea pieţei hârtiilor de valoare de stat în Republica Moldova, Teza de doctor, ASEM, Chişinău

Negruţa Veaceslav, Lupuşor Adrian (2015) Ce trebuie să conțină un potențial „Plan Anticriză” al noului Guvern?, http://www.expert-grup.org/ro/biblioteca/item/download/1424_acc261d2cda 8ad 18fe107ec42ec8eecf, [Accessed August 15th 2017]

* * *, Criza din sistemul bancar - principalul pericol pentru securitatea națională și economică, http://expert-grup.org/ro/comentarii/item/1111-sectorulbancar-mega&category=5, [Accessed June 23th 2017]

* * *, Criza financiară din Rusia din 1998 și cum a afectat Republica Moldova, http://agora.md/stiri/5160/criza-financiara-din-rusia-din-1998-si-cum-a-afectat-republica-moldova, [Accessed June 22th 2017]

* * *, Cumpărările/vânzările de valută străină contra lei moldoveneşti pe piaţa valutară internă în numerar în luna februarie 2015, http://www.bnm.md/md/cash_valute_market/2015, [Accessed August 16th 2017]

* * *, Deprecierea leului moldovenesc, http://ro.wikipedia.org/wiki/Deprecierea_leului_moldovenesc_%282015%29, [Accessed June 23th 2017]

* * *, Expert: De ce s-a depreciat leul și cum îl putem redresa, http://unimedia.info/stiri/expert-de-ce-s-a-depreciat-leul-si-cum-il-putem-redresa-88949.html, [Accessed August 16th 2017]

* * *, EVM-COMPOSITE: Căderi spectaculoase în evoluția indicelui bursier. Vedeţi care sunt motivele, http://unimedia.info/stiri/-12793.html, [Accessed June 22th 2017]

* * *, Evoluţia ratelor pentru: Dolar S.U.A. (USD) și Euro (EUR) pentru perioada: 01.01.2015-30.04.2015, http://www.bnm.md/md/rates_evolution, [Accessed August 14th 2017]

* * *, Faliment bancar în R. Moldova, provocat însă de gestiunea defectuoasă, mai degrabă decât de criză. Retrieved from http://www.basarabeni.ro/stiri/articol/faliment-bancar-in-rmoldova-provocat-insa-de-gestiunea-defectuoasa-mai-degraba-decat-de-criza-835/, [Accessed July 18th 2017]

* * *, Inflația în Republica Moldova, http://documents.tips/documents/inflatia-in-rm-55b085ef0f264.html, [Accessed June 21th 2017]

* * *, Moldova restructures Eurobond debt, https://www.neweurope.eu/article/moldova-restructures-eurobond-debt/, [Accessed June 14th 2017]

* * *, Moldova urmează să achite ultima tranşă a euroobligaţiunilor de $3,2 mil. în luna octombrie, http://www.allmoldova.com/ru/news/moldova-urmeaza-sa-achite-ultima-transa-a-euroobligatiunilor-de-32-mil-in-luna-octombrie, [Accessed June 14th 2017]

* * *, Piaţa valutară în luna februarie 2015, http://www.bnm.md/md/fm_valute_market/2015, [Accessed August 16th 2017]

* * *, Planul de consolidare a sistemului bancar moldovenesc, http://expert-grup.org/ro/biblioteca/item/1212-plan-consolidare-sistem-bancar-moldova&category=7, [Accessed August 16th 2017]

Radziwill Artur, Scerbatchi Octavian, Zaman Constantin (1999) Финансовый кризис в Молдове – Причины и последствия, http://www.cisr-md.org/pdf/case-rus1.pdf, [Accessed August 15th 2017]

* * *, Raportul anual al Băncii Naționale a Moldovei pentru anul 1999, http://www.bnm.org, [Accessed June 22th 2017]

* * *, Raportul anual al Băncii Naționale a Moldovei pentru anul 2000, http://bnm.md/ro/content/raport-anual-2000, [Accessed June 22th 2017]

* * *, Raportul anual al Băncii Naționale a Moldovei pentru anul 2009, http://bnm.md/files/2009_ro.pdf, [Accessed June 22th 2017]

* * *, Raportul anual al Băncii Naționale a Moldovei pentru anul 2015, http://bnm.md/files/RA_2015_ro_1.pdf, [Accessed July 20th 2017]

* * *, Raportul anual al Comisiei Naționale a Pieței Financiare pentru anul 2011, http://www.cnpf.md, , [Accessed June 22th 2017]

* * *, Ratele de schimb (curs valutar), http://www.bnm.org/ro/content/ratele-de-schimb, [Accessed June 22th 2017]

* * *, Situaţie critică pe piaţa de capital din Republica Moldova; Volumul tranzacţiilor a scăzut cu 70 la sută, http://www.jurnal.md/ro/economic/2015/12/9/situatie-critica-pe-piata-de-capital-din-republica-moldova-volumul-tranzactiilor-a-scazut-cu-70-la-suta/, [Accessed August 16th 2017]

* * *, Situația incertă de pe piața valutară nu se va schimba în scurt timp. O spun reprezentanții BNM, http://unimedia.info/stiri/video-situatia-incerta-de-pe-piata-valutara-nu-se-va-schimba-in-scurt-timp--o-spun-reprezentantii-bnm-88742.html, [Accessed August 16th 2017]

* * *, Экономический спад Молдовы 1990-х годов: факторы и проявления, http://cc-sauran.kz/rubriki/economika/91-econom-spad-1990-moldova.html, [Accessed June 20th 2017]

BANKING SYSTEM - PRESENT AND PERSPECTIVES. COMPARATIVE ANALYSIS REPUBLIC OF MOLDOVA AND ROMANIA

Cristina GĂNESCU[53], PhD
Victoria POSTOLACHE[54], PhD

Abstract

The development of the banking sector both in the Republic of Moldova and in Romania is one of the priorities of the sustainable development of the state in the conditions of a globalized economy. In this context, the evaluation of banking performance and banking risk indicators is one of the keys to settlement the problems faced by the banking sector today. The Republic of Moldova and Romania, being neighboring states, also has a banking system based on two levels: the Central Bank and the commercial banks, which also appear as leading actors in the development of the economy. Thus, a comparative analysis of the evolution of banking performance indicators and of banking risk indicators is of particular interest in establishing partnership relations, given that only one bank from Romania - the Romanian Commercial Bank is present on the Moldovan banking market.

Keywords: commercial bank, banking system, central bank, banking performance, banking risk.

JEL Classification: E44, E58, G21

Introduction

The post-crisis development of the economy imposes new requirements for the financial-credit system not only for the Republic of Moldova, but also for Romania. In this respect, research into the modernization of the banking system is becoming more and more relevant. Currently, key issues, trends and prospects for improving banking activity are actively discussed. However, existing developments require systematization, synthesis and identification of priority areas. Often, the proposals for modernization do not correspond to the realities of the economy of either the Republic of Moldova or Romania, because they represent a copy of the foreign experience. The main directions of further development should be established on the basis of a study of the development stages of the banking system in the Republic of Moldova and Romania. Thus, according to the literature, the banking sector of the Republic of Moldova and Romania crossed several stages, being influenced by the existence of legal norms regulating the banking activity.

Description of the Problem

The banking sector is in itself a dynamic, complex system and provides for strict regulation by the competent bodies, focusing on the favorable effects it generates for the economy. At the same time, the banking sector, both the Republic of Moldova and Romania, remains vulnerable to the effects of the global financial crisis due to existing partnership relations. In this context, we need to mention that in the future there is a need to minimize these effects by implementing anti-crisis measures.

Thus, according to the specialists D. Hoelscher and M. Quintyn [1], **can be distinguished** 3 phases in anti-crisis management, as reflected in the figure 1.

Thus, crisis management is the natural state of economic need, in which the analysis, evaluation, preventive forecasting and warning of possible negative trends is only possible norm of life.

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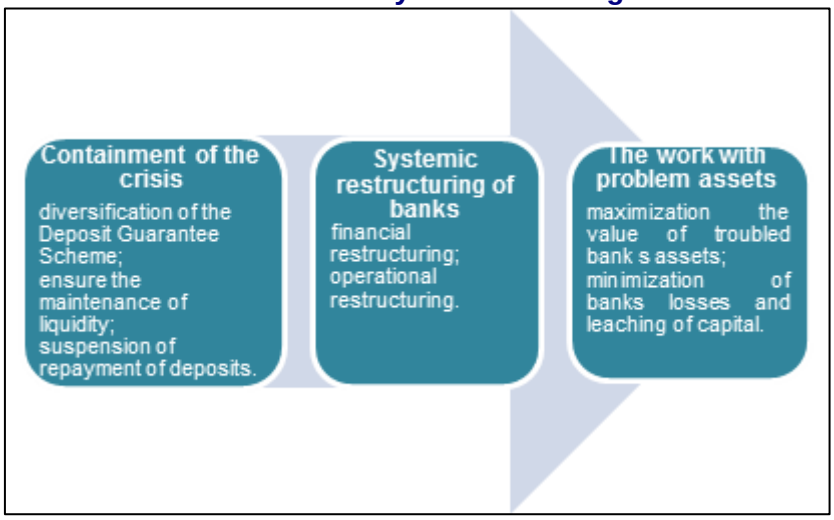
Figure 1 - The stages of state anti-crisis management in the context of a systemic banking crisis.


Containment of the crisis
diversification of the Deposit Guarantee Scheme;
ensure the maintenance of liquidity;
suspension of repayment of deposits.
Systemic restructuring of banks
financial restructuring;
operational restructuring.
The work with problem assets
maximization the value of troubled bank s assets;
minimization of banks losses and leaching of capital.

Source: adapted by the author after D. Hoelscher and M. Quintyn

The main directions for the development of the banking sector of the Republic of Moldova and Romania are aimed at creating the conditions for economic growth and strengthening the stability of the banking sector, increasing the banking sector's role in the economy, maintaining the efficiency, security and reliability of the banking system, creating conditions for increasing access to banking services and availability an additional level of financial growth mediation, as well as to prevent commercial banks from engaging in unhealthy and unsafe banking practices.

Methodology and Data Sources

The purpose of the banking system of the Republic of Moldova and Romania is to establish a stable and trustworthy system of financial institutions able to mobilize efficiently the domestic financial resources of the country and to provide banking services that meet the needs of their consumers (population, economic agents, state bodies).

The exposed ones indicate the need for an analysis of the macroeconomic indicators characteristic of the banking sector in the Republic of Moldova and Romania, in order to detect the correlations that exist at the banking system level and to notice the differences which are.

Table 1

The macroeconomic indicators of the banking sector of the Republic of Moldova and Romania

Indicators	Normative	2011	2012	2013	2014	2015	2016
Risk weighted capital adequacy	≥ 16%	30,1	24,4	23,02	13,92	26,16	29,77
Long-term liquidity	≤ 1 unit	0,7	0,7	0,71	1,54	0,7	0,64
Current liquidity	≥ 20 %	33,2	32,9	33,76	22,48	41,55	49,30
Solvency ratio	≥ 8%	14,87	14,94	15,46	17,6	19,2	19,7
Immediate liquidity	> 30%	37,17	35,88	41,49	41,1	40,8	40,3

Source: elaborate by the author
based on data from www.bnm.md/md/financial_indices_of_bank_system.

According to the data presented in table 1, we find that there is a discrepancy between the norms for the solvency ratio, because in the banking sector of Romania the BASEL III provisions were implemented more rapidly, whereas in the Republic of Moldova only the twining project implementation with the support of the ECB of the NBR.

Thus, for the banking sector of the Republic of Moldova there is a compliance with the norm imposed in the investigated years, with the exception of the year 2014 when the "theft of the century" took place. The values presented show a good capitalization of the banking sector and an increased capacity to cover risk-weighted assets.

In the banking sector of Romania there were no dangers in the chapter of the capital indicator, because for the whole analyzed period the obtained values are higher compared to the normative imposed by the NBR and indicates an increase from 14.87% to 19.7%. In the context of compliance with EU legislation, the NBR for 2016 introduced additional capital requirements, consisting of:

- the capital conservation buffer in the amount of 0,625% of the total value of the risk exposures of the Romanian legal entities;
- the anti-cyclic shock absorber in the amount of zero percent;
- the O-SII buffer in the amount of 1% of the total exposure value for credit institutions identified as systemically important [3].

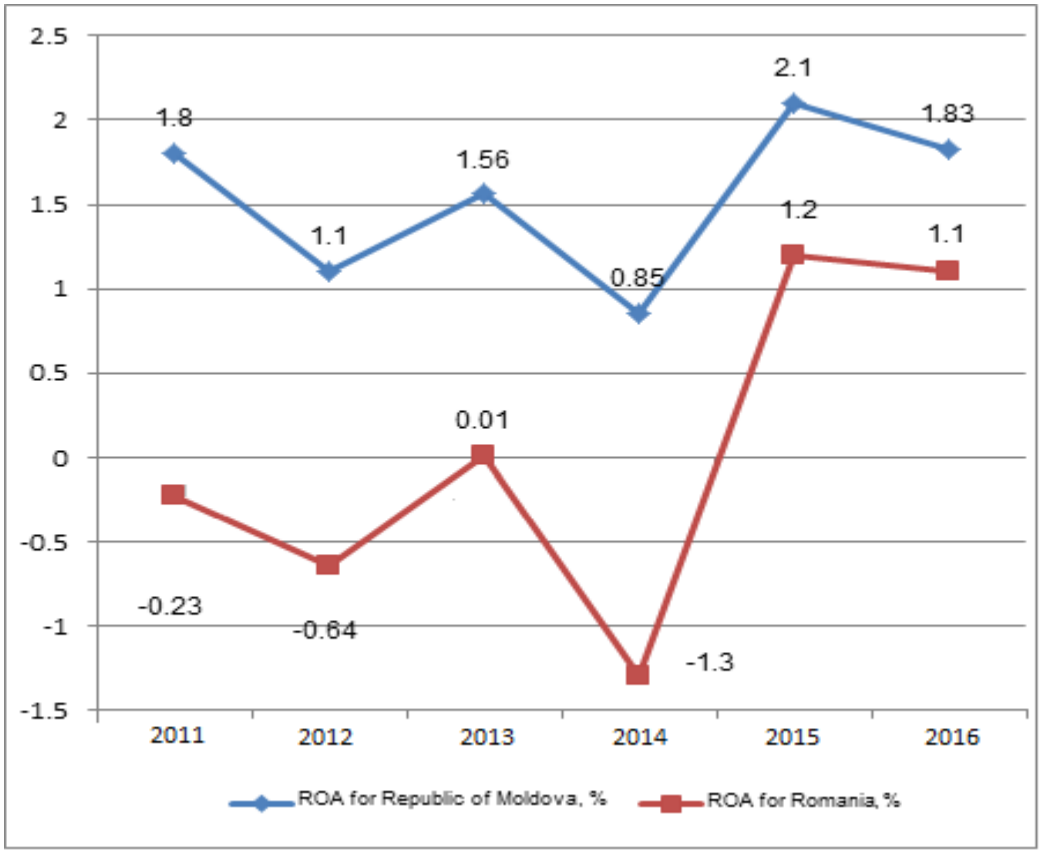
Long-term liquidity presents an identical trend for the years 2011 - 2013 and 2015 - 2016 by achieving equal results and complying with the norm imposed by the NBM and only in 2014 we notice a considerable deviation from the normative because of the liquidity supply that came from the NBM side at the end of the year.

The current liquidity for the banking sector of the Republic of Moldova takes values in strict compliance with the NBM recommendation for the entire analyzed period.

For the banking sector of Romania, we also see a positive evolution of the values for immediate liquidity, which are higher for the entire analyzed period compared to the normative imposed by the NBR.

At the next stage, of course, the assessment of bank profitability indicators is based on which it can be said or denied the existence of a performing banking sector.

Figure 2 - Evolution of asset profitability in the Republic of Moldova and Romania



Source: elaborated by the author based on data from www.bnm.md/md/financial_indices_of_bank_system and http://www.bnr.ro/Publicatii-periodice

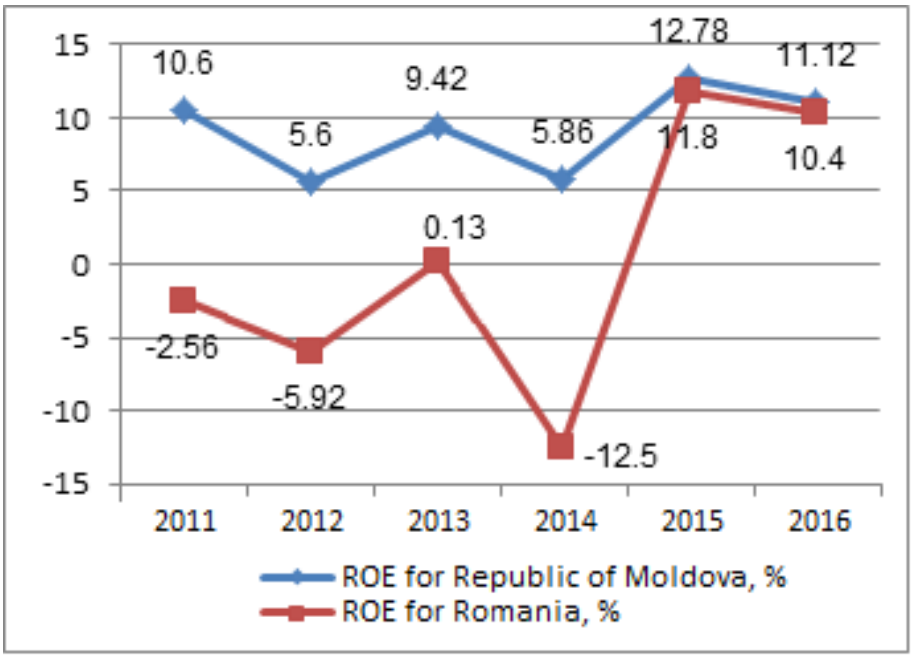
From the information shown in Figure 2, we note the following:

- the return on assets for the banking sector of the Republic of Moldova showed positive values during the assessed period ranging between 0.85% for 2014 and 2.1% in 2015. At the same time

in the period 2011 - 2012, 2013 - 2014 and 2015 - 2016 there was a reduction of the indicator under the influence of the events that took place in the Moldovan economy and of the changes applied in the prudential norms. For the years 2012 - 2013 and 2014-2015 there is a slight increase, which is explained by the increase in assets in the banking sector in the same proportion as the profit growth per banking sector;

- for Romania, the situation is less favorable, as for the years 2011, 2012 and 2014 the ROA values are negative, indicating deficiencies in the profitability per system. Thus, the highest value of -1.3% was obtained for 2014, as stated in the Financial Stability Report for 2014, the efforts made by credit institutions towards the clearance of balance sheets were reflected, on the one hand, in terms of improving the quality of assets, by recording the rate of non-performing loans on a downward slope and, on the other hand, in the profitability by setting up additional provisions. Thus, the cumulative loss amounted to ROL 4.7 billion at the end of 2014, driven by the increase in provisions for provisions, which exceeded the operational profit level, as banks had to assume the losses resulting from non-performing loans. ROA reached a level of 1.1% at the end of 2016, down slightly by 0.1 percentage points versus 2015, against a 6.6 percent increase in assets at average to ROL 361,536.8 million to ROL 385,417.6 million), together with a narrowing of the net profit of 2016 [3].

Figure 3 - Deviation of ROE in the Republic of Moldova and Romania



Source: elaborated by the author based on data from www.bnm.md/md/financial_indices_of_bank_system and http://www.bnr.ro/Publicatii-periodice

According to the data presented in figure 3, we note that in the banking sector of the Republic of Moldova for the years 2011-2016 there are positive values for the return on capital due to the net profit per banking sector. The ROE values vary from period to period, repeating ROA, with only higher results. Thus, the maximum value obtained is in the year 2015 in the amount of 12.78% and the minimum in 2012, ROE being 5.6%.

The Romanian banking sector's results are slightly lower due to the net loss in 2011, 2012 and 2014, generating negative ROE values of -2.56%, -5.92% and -12.5 %. Nevertheless, in the years 2015-2016 the situation in the banking sector of Romania improved and positive values for this indicator were recorded. Thus, the ROE reached 10.4 percent at the end of 2016 and showed a good result of the shareholder's investment compared to the European average of 3.3 percent. However, compared with 2015, the indicator reveals a slight reduction in the remuneration of bank capital as compared to the end of 2015 (by 1.4 percentage points), amid the reduction in net profit and, at the same time, the increase in equity to average 4.8 percent).

Results Obtained

The evaluation of the macroeconomic indicators allows us to realize that the successful completion of the Twining project and the modification of the banking legislation in the Republic of Moldova will create a favorable background for the more active integration of the Moldovan banking sector into the EU with the support of the NBR. For this, it is necessary to focus on implementing a macro-prudential policy in line with international provisions and focusing on a wide range of instruments recommended by the 30-nation group meetings.

Given a balanced macroeconomic situation, the achievement of macro-prudential regulatory and supervisory objectives will contribute to the achievement of monetary policy goals, but macroeconomic imbalances between macro-prudential and monetary policy may raise conflicts of interest. As a result, the regulator will be required to make a choice between supporting the real economy and the financial system. Depending on the characteristics of the financial system and its impact on the real segment of the economy, the specific choice of the regulator is currently optional.

Conclusions

Therefore, from the researched materials, we note the following deficiencies characteristic both for the banking sector of the Republic of Moldova and for that of Romania:

- the irresponsibility of the management of some banks when making managerial decisions;

- unsatisfactory state of the bank's management by the owners, including the orientation of banks, credit institutions to serve only the interests of a small group of bank owners;

- the existence of non-transparent forms of credit decision, the inaccuracy of the accounting documents and the reports provided;

- involvement of banks, credit institutions in illegal activities;

- insufficient technological and informational security evidence of banks, credit institutions.

All this affects the reputation of the banking sector and the level of confidence in banks, aggravating their ability to attract foreign investment. Therefore, switching to an intensive banking sector development model should become the most important for the entire banking community. This pattern of development requires a substantial increase in the level of protection of private property, the formation of legal mechanisms that protect the interests of creditors and the efficiency of the judiciary. Under conditions of high competition and difficult financial exposure, the natural way of survival is to strengthen bank assets by reducing banks, mergers and acquisitions.

The important directions for solving the problems of the banking sector would be the following:

1) improving the regulatory framework and linking it to CRD IV by taking over Romania's experience in this area, creating a regulatory and supervisory system in the field of financial services;

2) improving the quality of corporate governance and risk management in credit institutions;

3) the introduction of modern banking technologies;

4) expanding the opportunities and the quality of banking services consumption by the population and economic entities;

5) prevent the involvement of credit institutions in illegal activities.

The implementation of these measures by the NBM and the NBR will ensure a qualitative improvement in the banking services of the Moldovan and Romanian economy and contribute to a balanced growth, stable sustainable development of the economy.

Future Directions to Be Approached

Under current conditions, the banks in the Republic of Moldova and Romania are to promote a tough policy regarding bank risk management and to observe the prudential norms imposed by NBM and NBR. The correspondence of the results achieved by the big banks with the norms imposed by the NBM and NBR will determine the financial stability of the banking sector and will increase the confidence of the population in the banking sector. In the future, the points of tangency between prudential regulations of the Romanian banking sector and those of the banking sector of the Republic of Moldova will be identified in order to develop the bilateral relations of cooperation and opening up new acquisitions of banks.

Bibliography

Hoelscher, D., Quintyn, M. (2003), Managing Systemic Banking Crises, IMF Occasional Paper, 224, 80 p.

* * *, http://www.bnm.md/md/financial_indices_of_bank_system

* * *, http://www.bnr.ro/Publicatii-periodice-204.aspx#ctl00_ctl00_CPH1_CPH1_19966_lnkTitle

THE POOREST IN THE WORLD PAYS FOR CRISIS

Sergiu GHERBOVEȚ [55], PhD(c)

Abstract

For centuries the mechanics of the money system have remained hidden from the prying eyes of the populace. Its impact, both on a national and international level, is perhaps unsurpassed. In fact, the monetary system provides the mainstay for international dominance and national control. Is hard without crisis to change economic or political system but often those who are set up to defend the interests of the people and state as a whole, authorities, reject what doesn't fit well with what they like. Today, as these mainstays are being shaken by crises, the need for open and honest dialogue on the future system is at its highest level.

Keywords: money system, bubbles, money creation, banking, loans

JEL classification: E42, E44

Introduction

An economic crisis is like a cancer. If you are just waiting, thinking that your health state is improving, cancer will be growing up fast and by the time it will be too late to treat it. Even if a government have no money and lives out of taxes, it has opportunities and obligations all along. Obviously, a state supports those theories that suit it. For this reason, it often denies the theory of crises. In order to better understand possible effects of a crisis, it is noteworthy to have a look at the most important ones (see table 1) and analysis of more recent (Gherbovet, 2016).

Table 1

Important financial crisis

Period of time	Characteristics
1340	Bankruptcy of England, due to "The one hundred years war" with France
1637	Tulips crisis and its speculative bubble. Prices reached more than 10 times the annual income of an artisan and then suddenly collapsed.
1720	The UK's "South Sea" bubble and the "Mississippi" bubble in France due to a financial pyramid. In both cases, the company assumed the national debt of the country (80-85% in the UK and 100% in France) and then exploded.
1772	The credit (banking) crisis originated in London and spread to other parts of Europe such as Scotland and the Netherlands. Economic growth at that time was highly dependent on the use of credit, which relied heavily on people's trust in banks. Trust began to decline; a lot of people gathered at the banks and demanded repayment of the debt in cash or tried to withdraw their deposits. As a result, there were a dramatic rise in bankruptcy number and many other businesses have suffered.
1792	The bank credit crisis, precipitated by credit expansion of the newly formed United States Bank and by the speculations of several known bankers (William Duer, Alexander Macomb and others). Duer, Macomb and their colleagues tried to increase the USA debentures and bank stock prices. When they broke down on loans, prices fell, causing a banking panic. The simultaneous tightening of credit by the United States Bank increased the initial panic. Alexander Hamilton, the secretary of the Treasury at that time, was able to manage the crisis by providing banks with dollars to make stock market acquisitions, which allowed stabilizing the market.
1796-1797	First issues appeared in the US as a speculative bubble. The crisis deepened when the Bank of England suspended payments on February 25, 1797 under the 1797 Restriction Act. At the risk of the French invasion, withdrawal of deposits occurred. In combination with the collapse of the US real estate market, the crisis led to the collapse of many major commercial firms, as well as the deprivation of liberty of many US debtors.

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1813	The Danish state bankruptcy, due to the war with England in 1807. This caused a financial crisis and, as consequence, Denmark were unable to honor its international financial obligations.
1819	The US panic generated by global market changes as a result of the Napoleonic wars. The severity of the economic slowdown was due to the high speculation in the field of public land, fueled by the uncontrolled problem of paper money from banks and concerns in the business environment.
1825	A decline in the stock market, which began in the Bank of England, resulting in some measure from speculative investments in Latin America. The crisis led to the closure of many banks in England, but has also spread across the markets in Europe, Latin America and the US. The boom of the stock market became a bubble and the banks trapped in this euphoria gave risky loans. An infusion of gold reserves from Banque de France saved the Bank of England from complete collapse completely.
1837	Banks closed. Businesses failed. Profits, prices and incomes have fallen while unemployment has risen. Panic had internal and external causes. Western pecuniary lending practices, a strong decline in cotton prices, a collapsing real estate bubble, international cash flows and restrictive lending policies in the UK have been the cause of this panic in the US.
1847	Panic began as a collapse of the British financial markets associated with the end of the 1840 railroad boom. Monetary inflation was caused by the Bank of England, which demanded the cancellation of the 1844 act. This act was fixing the maximum amount of money that might be in circulation, being guaranteed by gold and silver reserves. In addition, the act said that the money supply in circulation could only be increased when gold or silver reserves rose up proportionally.
1857	Financial panic in the US caused by the decline of the international economy and the over-expansion of the national economy. The First World Economic Crisis.
1866	Britain's panic that has led to public agitation for political reforms and a sharp rise in unemployment to 8% and a subsequent drop in salaries.
1873-1879	Post-war inflation, speculative investments mainly in the railway sector, an important trade deficit, repercussions of the economic displacement in Europe resulting from the Franco-Prussian War (1870-1871), loss of properties in the fires occurred in Chicago (1871) and Boston (1872) generated drastic tensions on banking reserves that dropped drastically in New York.
1884	The panic was due to the loss of confidence in Wall Street because the bankruptcy of two big companies caused bankruptcy in many companies.
1890	Barings bank’s bankruptcy in London, mainly due to excessive risk taking on investments in Argentina, had also effects in the US. A bank consortium had created a fund that helped to manage this bank crisis by avoiding an acute depression.
1893	America's panic, similar to that occurred in 1873, was marked by the excess collapse in the railway construction and the fragile funding in this field, resulting in a series of bank failures.
1893	The banking crisis in Australia. During the 1880s there was a speculative boom in the Australian real estate market. The Australian banks operated in a free banking system; there was no central bank or government deposit guarantee. Commercial banks have borrowed strongly, but after the collapse of asset prices in 1888, they went bankrupt.
1896	A panic occurred in the United States. It was less serious than other panics of the era. It was precipitated by a fall in silver reserves and market concerns about the effects it would have on the gold standard. Commodity price deflation led the stock exchange to a new low in a trend that began to reverse only after William McKinley's election.
1901	This panic was the first stock market crash in New York, caused by the struggles to hold the financial control of the North Pacific Railways.
1907	The bankers' panic or Knickerbocker crisis, USA. The New York stock market fell by nearly 50%. Unregulated bets on the stock exchange, loss of depositor confidence, withdrawal of liquidity from the market led to cash withdrawals from banks and investment companies. J. P. Morgan saved the line by unlocking important resources to strengthen the banking system. The commission created to investigate the crisis led to the creation of the Federal Reserve System.
1910-1911	A slight crisis as a result of the Sherman anti-trust law. It affected the stock market and the traders benefiting from the government's dissolution of the trusts. The crisis of the Shanghai rubber boot market caused by bankers and stockholders who have overestimated rubber stocks. It led to bankruptcy.
1910	Shanghai stock market crisis provoked by bankers and stockholders who overestimated rubber stocks. It has led to many bankruptcies.

1929	Black Tuesday. The most devastating stock market collapse in the US history. The collapse marked the beginning of 10 years of crisis that affected all western industrialized countries.
1973	The oil crisis. Oil prices exploded, causing the collapse of the stock market, especially the UK one. The crash came after the collapse of the Bretton Woods system along with the "Nixon Shock" and the depreciation of the American dollar.
1973-1975	Banking crisis in the UK. Banks gave credit based on rising house prices. A sharp drop in real estate prices coupled with spontaneous increases in interest rates made loans being secured by properties with a lower value than loans. The Bank of England saved the position.
1980	The debt crisis in Latin America called the "lost decade" when the countries of Latin America reached a point where their external debt exceeded domestic possibilities.
1983	Banking crisis. The actions of the four largest banks in Israel collapsed and were nationalized by the state.
1987	Black Monday, the biggest drop in one day in the history of the stock market. The crash began in Hong Kong and spread to Western Europe and then to the US.
1989-1991	US Savings and Loan Crisis. Institutions have long-term loans at fixed rates using short-term money. When interest has increased, it has been unable to attract adequate capital and many have entered into insolvency. Inventory strategies that seemed profitable were invented, but in reality they recorded losses.
1990	Japanese bubble at asset prices. Real estate and asset prices have increased greatly. Credit expansion. Then the prices collapsed, resulting in bad loans and thus difficulties for financial institutions.
1990	The banking crisis in Scandinavia. In Sweden a financial and real estate bubble formed, fueled by a rapid increase in lending. A restructuration of the tax system combined with an international recovery caused the bursting of the bubble. The government took up over a quarter of its bank assets. In Finland, a systemic crisis of the entire financial sector occured after a few years of debt-based economic boom.
1990	The recession describes the economic slowdown that has affected much of the world's economies.

Description of the Problem

Today the current system is inherently unstable as a result of the international power imbalance. Statistical analysis has found that every time an empire begins to near its own demise, its currency will be debased. There is no guide to how this whole system operates. Current reality is that most money is neither paper nor coins, but digital. This represents just numbers in a computer system. It's your Visa debit card. It's your electronic ATM card. It's a piece of plastic. It's all a big database and this digital money is what we are now using to make payments with. It's what we actually use to run the economy. Money in the current system means debt. It's created when the banks make loans. Consequently, the only way, in the current system, that we have to have money is to borrow it. Because economists have completely confused things, both in monetary policy terms, but also in economic thinking, and because most people still harbour the old fashioned view that you need savings before you can invest, that we have the today mess. As mentioned before, in current system we have to borrow in order to have an economy. We have to be in debt to the banks. That guarantees a massive profit to the banks. Even if you think the money belongs to you, somebody somewhere is paying interest on that money. The banking system has such a huge impact on the world, but only because it supplies our nation's money supply. We have to protect them. We have to subsidize them. We have to allow them to continue because the disaster of a bank collapse affects us all in a huge way.

Methodology

Now, let's speak about bubbles (Campbell, J.Y. 2014). A bubble occurs when there is very high inflation in the price of a specific good or service over a short period of time. The first recorded bubble was the tulip bubble of 1637. This example is relevant to emphasize you the first ever financial bubble and crash. The craze for tulips - black tulips being a mythical ideal of what somebody could genetically engineer through cultivation after many generations -became a mania in the Netherlands in the 1630s. What they didn't realise was that many of the very rare patterns of tulips bulbs were caused by a virus and weren't genetic at all. But they traded them to the extent

that tulips were ten times worth then the average annual salary of a person working in the Netherlands.

There was a future market in tulip bulbs because obviously you plant them now but you don't know what's going to come out of the ground. As you can see, already, 400 years ago, that type of financial system existed. Unlike tulips, which are a disposable luxury, houses are both a necessity and a luxury. And as such, they are ideal as a vehicle for money and bubble creation (Engsted, T. 2016). A dwelling is perhaps the most prized possession of value most people aspire to. Inflating house prices in this way allows a nation to expand its money supply without affecting inflation data. The additional purchasing power created increases the perceived wealth in relation to other nations and thus it is creating a relative power. It is a way of increasing monetary power without investing in the productive growth of industry.

Certainly if you look at Britain and American outstanding examples, both of these are countries with very high rates of private home ownership so you've got a good base to try and perform this sort of policy off the back of. I think it was quite deliberate in the case of the US. Also is important to identify bubbles (Shi, S.P. and Song, Y. 2016) and testing for collapsing bubbles (Hall, S. and Sola, M. 1993). How to avoid inflation or deflation ? Today inflation can be avoided if the amount of money that goes into the economy is regulated in a way without exceeding the actual activity that's happening in the economy. Now, the best way to do that, in my opinion, is to make sure that money is issued into the economy only for productive investment, for productive goods and services. By the way, money enters in order to help a small business to start up creating new jobs and additional purchasing power avoiding inflation.

During their history almost all central bank shave employed forms of direct credit regulation. The central bank will determine desired nominal GDP growth then calculate the necessary amount of credit creation to achieve this. And then allocate this credit creation both across the various banks and type of banks and across the industrial sectors. Unproductive credit was suppressed. Thus it was difficult or impossible to obtain bank credit for large scale, purely speculative transactions such as today's large scale bank funding to hedge funds. The World Bank recognised in a 1993 study that this method of intervention in credit allocation was at the core of the East Asian economic miracle. There're all sorts of things that governments have done in the past, very successfully in a number of cases.

The examples that spring to mind are South Korea and Japan. Often in East Asia, governments have targeted on how they're going to rebalance the economy, picking sectors and deciding where the investment should take place. You have to have a system where credit is put into productive avenues, building high speed rail links, building houses rather than giving people money to inflate the price of houses. Bank created currency allows the private banks to suck wealth from the economy and over time results in a gradual decrease in the standard of living. As people become poorer they become even more dependent on debt. People are getting poorer in real terms. It's because prices are always going up as new money is continuously being pumped into the system by the banks and they're creating it all as debt so at the same time as prices are going up and things are getting more expensive, we're getting further and further into debt and our wealth and the return that we get from actually working is getting less and less all the time.

You can't deal with poverty when you have a financial system and a money system that distributes money from the poor to the very rich. Any distribution that you try and do in the opposite direction is effectively pissing in the wind. If you look at issues like increasing inequality one obvious way to tackle inequality is to have a redistributive tax system. You tax the rich you give some money to the poor. You move a bit of money down the scale. That's all very well, but if you overlook the fact that there's another redistributive system which is taking money from the poor and giving it to the rich, then you're not really going to tackle this inequality and the way a debt-based money system works. That debt is typically going to end up with the poor, the lower-middle classes, those people end up with the debt and they end up paying interest on that money which then goes back to the banking sector. What this system does overall is it distributes money from the poor to the rich essentially. This is why in the event of a crisis the risk is transferred to the taxpayer. But even during normal times banks receive numerous guarantees and benefits beyond the right to create money.

No current Government is brave enough to tame banks. Perhaps they need a plan. The spending cuts agenda is an attempt by the government to shift debt from its account to that of the public. This is the Government's response to the bank bail outs. It is necessary in a debt based monetary system where increased purchasing power is the result of growing debt and where a diversification of debt provides overall stability and market confidence. Policies such as student fee increases and the privatization of public services, assets and industry follow the same model. The problem we're facing is that there is this transference from the public debt to private debt which is essentially a way of transferring risk. Thus individuals with most debt will be vulnerable. If there is another financial shock, the people who will pay the penalty are the poorest people in society. The poorest in the world pay for crises even when they've not benefited from the often reckless and speculative booms. Over the last 30 years we've seen high income differentials increase. The rich people become much richer while ordinary people haven't, they've stayed at the same level or they've got poorer. One of the ways that the economy was kept was by providing cheap credits, providing debt to people who couldn't really afford things anymore.

Consequently, they kept buying and when it collapses, that poor people have to pay once again. Moreover, the average people is being asked to pay more than ever to borrow on overdrafts and credit cards. Debts between the very wealthy or between governments can always be renegotiated and always existed throughout world history. They're not anything set in stone. It's generally speaking when you have debts owed by the poor to the rich. Suddenly debts became a sacred obligation more important than anything else. The idea of renegotiating them becomes unthinkable. That's the way to change what we have, take all power and all freedoms away from the people and collect everything into the hands of one small group with absolute power. From the people; without the people; against the people. What's been interesting out of all this is the question of democracy that's been opened up very starkly in Europe, that you have a government of bankers essentially imposed upon you. Bankers are more or less whose who got us into this mess to put it rather crudely, but that's a good first approximation and then you say that bankers are the people who therefore are going to get us out of it and incidentally there going to run your country now. The banking crisis drove people into poverty. The mortality statistics of people who go into poverty rise hugely for a whole range of reasons. So the banking crisis isn't just about becoming poorer. What really happened is that over years some countries had accumulated big trade deficits.

These countries were spending more than they've been earning so they've had to borrow from abroad and they've been doing this during a long period of time. These countries cannot go on and there are two ways in which this process can come to an end. Firstly, if they can't find new ways to become competitive, they will not be able to repay the debts. Secondly, it is important to put in place a framework to rebalance the economy. Currency war, also known as competitive devaluation, is a condition where countries compete against each other to achieve a relatively low exchange rate for their currency. As the amount needed to buy a particular currency falls, the real price of exports from that country does the same. Domestic industry receives a boost in demand both at home and abroad. If a country wants to export more it is sufficient to depreciate its currency. That makes its goods cheaper, everyone else buys them and it'll all be better off. The issue here is if you depreciate its like everyone else appreciates against you. Their stuff becomes more expensive so they're not happy about that. They also want to depreciate and this is where you can see a competitive round of devaluations breaking out.

To decrease the value of its national currency a national central bank sells reserve currency into the market. During the long phase of commodity money, the exchange rate would depend on the amount of gold, silver or copper contained in the coins of each country. Similarly after the advent of paper money and the gold standard, the exchange rate depended on the amount of gold the government promised to pay the holder of the bank notes. These amounts did not vary greatly during a short time and as such exchange rates between currencies were relatively stable. After the Second World War currencies were pegged to the dollar and the dollar was backed by gold, this system came to an end in 1971. As nowadays, we have a modern financial system where money is chaotically organized, there is no more exchange rate because there is no gold standard system to sustain it, thus we don't really need an exchange rate. In fact, we believe the market will resolve all the problems of exchange whether one currency should be more worth than a second one is a reflection of one economy relative to another and if one changes the currency, exchange rate must change and if we need that to happen it will happen magically by the efficiency of market

and profit seeking. A currency's value in relation to another currency is determined by the market. If more people want to buy a currency than sell it its value increases. If more people want to sell, its value decreases. The value is set by individual banks and central bank interventions as they buy and sell currencies they will adjust the exchange rate.

Many of the world's financial crises in the past thirty years have been caused by rapid withdrawals of one nation currency or the currencies of an entire region. This type of activity is often referred to as financial warfare. Some major institutions substantially benefited from it. Any large bank has done somewhat better out of this set of arrangements than it would have done in a far more regulated environment. It's made people very, very wealthy. It's allowed financial markets to enormously expand. Anybody involved in that is keen on seeing a deregulated world. That's the world as it is. It is making some people very rich. Reserves have become the way in which you can insure yourself against speculations, speculative attacks (Bernanke B S – Gertler. M, 2001), falling markets (Mishkin, F S – White, E N, 2003) or bubbles (Lopez M. , 2015) . When a country succumbs to a speculative attack, it is asked to deregulate its markets and adapt its financial system to the dominant one. The big problem that's faced by most developing countries that've entered into a debt crises is they are indirectly guided by the powerful ones. The International Monetary Fund, which in many ways governs the global financial system, indicates that the way to get out of debt is first of all to restructure your economy. Especially to increase your exports so you're earning more foreign currency and then you can pay off your debt.

Unfortunately several times that was proved to not be the case at all. Actually countries cut back their public spending to the bone so they stopped growing; they stopped having any potential for growth and what they produce is aimed to be exported. They were paying off their debts but they weren't developing their own economy at all. They were paying far more in debt repayments than they were spending on health or education or anything else and their debts just kept growing. The country becomes a vassal state allowing large corporations to exploit its natural resources and workforce. Expanding and maintaining imperial power through monetary dominance is not even a shadowy. During the last thirty years an idea emerged, labelled Neo-Liberalism. This idea implies floating exchange rates, weak regulation particularly of financial markets, minimal government interference or involvement in what the market does. There are also institutions - the outstanding one at this point is the IMF - that will actively try and enforce this state of affairs.

Consequently, it's not a great shadowy, that there are people behind the scenes somewhere trying to manipulate the world. For instance, when the IMF comes in, in order to try to solve countries debt problems, it imposes a set of conditions. In the 1980s and 90's they called that set of conditions a Structural Adjustment Programme and it tends to take similar forms wherever it happens. Indeed we can see structural adjustment programmes happening today in countries like Greece, Portugal and Ireland. These countries are instructed to decrease the amount they spend on the public sector, they are instructed to liberalise their trade market and their capital market, thus money can much more easily come in and out of their economy. The idea is that this will encourage investments to come in from richer parts of the world and that all of their problems will be solved from this investment. In fact this manner of dealing with debt problems is completely unfounded. Moreover, it destroys fledgling industries and capacities in these developing countries and developing countries become completely dependent on goods, services and capital from developed countries. Another thing, the IMF is very keen on is telling countries to lower the taxes that should be paid by multinational corporations, because it will encourage them to come in. Of course, what it also meant is the profit that multinational corporations made. In fact, the country itself doesn't benefit from this. Today many developing countries have got almost no tax base. Thus they're even more dependent on international capital markets, on the money markets, on creating debt. That's why you have so many countries in the world that have really been robbed of their sovereignty. It's very difficult to see how democratic societies can evolve or function when a government is more dependent on the diktats of the IMF and the money markets than it is on their own people.

Results Obtained

Sometimes agreement or international organizations are not working very well and is still work to be done as example fractional reserve requirements system that was changed by committee in Basel has an impact and some economist argue that produced Japanese crisis. While the financial

sector benefits enormously from the current monetary system, the system is neither stable nor fair. What the national banks do right now is that the cash they hold is backed up by government debt. The government can back up its promises by the fact that it can tax the public. So what they're implying is that cash is backed up by government debt, when government debt is backed up by the ability of the government to get cash from the public. Time and time again over the past thirty years private debts are being transformed into public debts, and ultimately the price of that debt is being paid by the public in the debtor country. This is why spending cuts are necessary. The system is designed to make certain people very rich at the expense of a nation's citizens and tax payers. The system lowers the standard of living of the majority and distributes this wealth amongst the privileged. So what we are left with is a financial system since the early seventies that has no fixed exchange rates that suddenly has increasingly open financial borders, that has central banks having to manage without having any control because there's nothing here where the gold used to be. Chaotically they have to ease quantitatively. They have to lend as a lender of last resort. Each economist is doing his own analysis in time of financial crisis, for example: supply and demand of currency, audit and analysis of banks, balance of payments analysis, public debt analysis etc. At the same time, a lot of information about interesting topics (*i.e.* semiparametric efficiency and robustness, high-dimensional inference, functional data analysis etc.) exists. How to parse too much information and make a proper analysis? A way of proposing models is not only formulas but cooperation of different experts. Circular economy models may have good answers for these challenges.

Conclusions

The worst the economic situation of a country is, more the authorities try to control it. There is no country in the world that has changed its economic or political system without a crisis. To change an economic structure is mandatory to pass through a crisis, but too much regulation is also bad. A balance has to be found. Banks are the most heavily subsidised businesses in the world, specially protected by governments. Electronic money is convenient for everyone, but it's especially convenient for the private banks, since they own, run and control the entire digital money system, gambling on the financial markets and push house prices out of reach of ordinary people by pumping hundreds of billions into risky mortgages. This is exactly how the banks caused the financial crisis and now the rest of us are being asked to pay for it. If we can't afford to run hospitals and build schools, can we really afford to subsidise the financial industry? Should we have to live with less so the bankers can have more? The private banks can't be trusted to hold the reigns to our entire economy. It is noteworthy to mention that a bank has the choice to whom make a loan: to a small business assuming a high risk of loan failing and defaulting without getting anything back essentially or to somebody with some collateral, with a house behind them, like a mortgage. So there's a simple incentive for banks to prefer putting money into housing than into a small business. Now that's a real problem if you widen that out across a whole economy, because it means there's an incentive to put money into speculative rather than productive investment. Once again, we need to think about how we create our monetary system that is more balanced between those two kinds of speculative and productive investment. The government is showing enormous reluctance to regulate the housing market and to again regulate the amount of money that banks put into houses.

Future Directions to be Approached

May be one direction is that banks can be allowed to fail. The system would actually be how people think it is - that when you put your money in the bank it's really safe - or at least they used to think perhaps before the 2008 crisis. There's a spectrum of opportunities there that we're just not exploring at the moment, that we're not even experimenting when we know that the system we have now is fundamentally flawed.

Bibliography

Bernanke, B S – Gertler, M (2001) Should central banks respond to movements in asset prices? American Economic Review, Vol. 91, No. 2, 253–257.

Campbell, J.Y. (2014). Empirical Asset Pricing: Eugene Fama, Lars Peter Hansen, and Robert Shiller, Scandinavian Journal of Economic, vol. 116, iss. 3, pp. 593-634.

Engsted, T. (2016). Fama on bubbles. Journal of Economic Survey, vol. 30, iss. 2, pp. 370-376.

Gherbovet S. (2016), Prospect for triggering crisis and related investment opportunities, Financial and Monetary Economics, Annual International Scientific Conference , Second edition, Bucharest, NIER, 2016

Hall, S. and Sola, M. (1993) Testing for collapsing bubbles: an endogenous switching ADF test. Discussion Paper 15-93, London Business School.

Lopez, M. (2015). Asset price bubbles and monetary policy in a small open economy. Ensayos sobre Politica Economica, vol. 33, iss. 77, pp. 93-102.

Mishkin, F. S. – White, E N (2003) US Stock market crashes and their aftermath: Implications for monetary policy. Article in the book 'Asset Price Bubbles-the Implications for Monetary, regulatory, and International Policies' edited by Hunter, Kaufman and Pomerleano.

Shi, S. P. and Song, Y. (2016). Identifying Speculative Bubbles Using an Infinite Hidden Markov Model. Journal of Financial Econometrics, vol. 14, iss. 1, pp. 159-184.

HESITANT ATTEMPTS TOWARDS NORMALIZING MONETARY POLICIES

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Abstract

The 2007- 09 crisis was initially called the Great Recession and afterwards the Great Financial Crisis, thus being implicitly acknowledged the determinant role of nominal/monetary economy in igniting the crisis of the real economy. So there has been no 'accident' that the so-called *unconventional monetary policies* (UMP) were the main tools used to stimulate financial and – hopefully – economic recovery. They have basically consisted in extremely low policy interest rates (zero or even negative) and an unprecedented enlargement of central banks' balance sheets. In principle, UMP were considered a temporary measure, useful for a couple of years. The prolonged stagnant recovery that followed the crisis has kept UMP in place for almost a decade (at least until 2017). This obvious abnormality for a 'free market' capitalist economy should have stopped long ago. Our study tries to analyze the peculiarities of this situation and the pros & cons for 'normalizing' monetary policies.

Keywords: unconventional monetary policies (UMP), quantitative (and qualitative) easing, nominal and real interest rates, central banks' balance sheets and unwinding balance sheets.

JEL classification: E 40, E 58, F 34, G 01

The rift between real and nominal facets of the economies that I firstly mentioned at the beginning of the 1990s rapidly deepened and became a major cause of macroeconomic disequilibria, provoking a series of foreign exchange crises in 1997-98. The early 2000s, by a huge speculative financial boom, provoked ever graver unbalances which finally determined the Great Financial Crisis in 2007-09. That time it was quite clear that the *nominal* economy, expressed by monetary and financial stocks and flows, almost totally overwhelmed *real* economy. Consequently central banks were considered as the main potential 'saviour' of the economic activity at both national and international levels. This is why *unconventional monetary policies* (UMP) have rather suddenly been perceived as the major actors of the so-called mix of macroeconomic policies. Basically UMP have consisted of: a drastic decrease of policy interest rates towards 'the lower bound' (zero or even negative); tremendously enlarging central banks' balance sheets; providing substantial financial stimulus to private sectors. Initially (toward the end of 2008), these measures were meant to be short-termed (not more than a couple of years). But after almost nine years (2017), they are still in force. Taking into account the nature and duration of the UMP, it is obvious that the economy based on capital has undergone a structural change/transformation: from the free market economy (in the meaning of David Hume and Adam Smith) to what could be considered a *transnational oligopolistic state capitalism*.

1. The declared aims of UMP were to put an end to a dramatic financial and economic crisis and afterwards to support a vigorous recovery. However the crisis proved to be deeper and longer than any other cyclical downturn since the Great Depression of the 1930s. As in the interwar period, this time the business cycle phases have been coincidental with a secular stagnation (a concept introduced in economics by Alvin Hansen before WW II). Although official statistics marked the end of the crisis around mid-2009, the expected recovery has been very weak, including some comebacks (especially in Western Europe). Despite of being a long recovery (at least until 2016/17), the average GDP growth rate – in most developed economies - has been significantly lower than in the previous recovery / expansions during the post-WW II era. As a relevant example, the US GDP has increased at an average rate of less than 2% per year (mid-2009 to 2016) versus an average pace of over 4% during the previous expansions. According to a traditional view, the longer and deeper a recession or crisis the faster should have been the growth rate that followed (the so-called catch-up process).The present recovery has been a striking exception: after a most serious financial and economic crisis, there has followed an anaemic and hesitant recovery. The following table includes data for the countries with widely elaborated UMP.

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Table 1

GDP growth rates in developed market economies (in %)

	1998-2007	2012-2013	2014-2015	2016	2017 (Q1)
United Kingdom	2,9	1,9	2,6	1,9	0,9
Euro area	2,3	-0,1	1,6	1,9	2,0
USA	3,0	2,0	2,4	1,8	1,2
Japan	1,1	1,6	0,4	1,6	1,0

Source: IMF World Economic Outlook, OECD, Bank of England, et al.

As underlined and analyzed in another study[57], a major explanation lies in the huge debts recorded by the essential layers of economy and society – government, firms, households. The financial crisis determined a deleveraging process, in which "businesses and individuals decreased spending to pay off outstanding debts, which shrank demand, but also limited individuals' and businesses' access to credit as financial institutions significantly diminished lending"[58], in a desperate attempt to decrease their own degree of indebtedness. Under these circumstances, central banks reduced policy interest rates toward zero or even negative levels while quantitative *easing* programmers delivered considerable amounts of monetary means into economy using different financial channels.[59]

On the background of a secular stagnation, UMP could not stimulate economic growth. On the contrary, they contributed to the disequilibrium between savings, spending and investment, which is a crucial correlation for a dynamic and balanced economy, therefore aggravating the scission between the nominal and real facets of the economy. If UMP alleviated somewhat the consequences of the financial crisis, especially by avoiding failures of transnational financial corporations, real economy was generally neglected or the impact on real economy was negligible. Moreover, the tremendous enlargement of central banks' balance sheets has had an important impact on financial markets, on their dimensions, quantitative and qualitative structure and profitability, by deforming yield curves. For example, after eight years of a sinuous recovery, the yield curves are rather flattened, showing some tendency to become inverted, which means skepticism about economic and financial developments.

The Federal Reserve, ECB, Bank of England, Bank of Japan, which are the four largest central banks, have "about $ 13 trillion on their balance sheets, a large proportion of which they believe needs to be roll off".[60] Before the Great Financial Crisis (GFC), the dimensions and structure of a central bank' balance sheet were mainly marked by foreign exchange reserve holdings as regards the *assets side* and by the amount of currency demanded in circulation and bank reserve balances on the *liability side.* After the GFC, the size and structure of central banks' balance sheets have changed dramatically. We illustrate this shocking phenomenon by the data concerning the US Federal Reserve system (FRS). Presently FRS has a $ 4,500 trillion balance sheet with the following components (table 2).

Table 2

Federal Reserve balance sheet (%)

Assets		Liabilities	
Mortgage-backed securities	39,5	Bank deposits	49,6
US Treasury securities	55,1	Currency	33,6
Other	5,4	Reverse repo	9,5
		US Treasury account	4,2
		Other	2,2
		Capital	0,9

Source: Federal Reserve, mid-2017

[57] L. C. Ionescu, "The Economy of Indebtedness", in Journal of Financial and Monetary Economics (JFME), No.1/2014.
[58] J. F. Stupak, Economic growth slower than previous 10 expansions, in CRS INSIGHT, June 30, 2016.
[59] A more detailed presentation could be found in L. C. Ionescu, "The Present Role of Central Banks – unconventional monetary policies", JFME, No.3/2016.
[60] J. Mauldin's newsletter, 9 July 2017.

The astonishing amplification of the shares belonging to mortgage-backed securities and Government bills & bonds has reflected the core of the *quantitative easing* waves (started at end-2008). Although speculative transactions with MBS (mortgage-backed securities) were a crucial trigger for the beginning of GFC, central banks have purchased impressive amounts of this artificially created financial instrument to help 'improving' the qualitative structure of important banks' balance sheets. However the excessive prolonging of these *emergency* monetary policies – year after year – finally and obviously exhausted their potentially stimulative effects. Firstly the reference interest rates reached their lower bound (zero and/or negative), without having a remarkable role in increasing real investments and GDP growth rates. Moreover extremely low interest rates have discouraged savings, which is the *healthiest* source for new investment. Thus in USA, at the end of 2016, personal savings rate was the smallest since the end of 2007 (when the economy had just entered a grave recession).

2. According to initial scenarios, the 'normalization' of monetary policies should have begun not later than a couple of years after the end of the crisis as such: that would have meant 2011/12. The weak and hesitant recovery postponed a clear decision in this sense. However debates have become more intense and intentions to *normalize* have been expressed since 2013. For example, in May that year, Ben Bernanke – the former Chairman of the Federal Reserve Board – firstly mentioned an intention of gradually diminishing or 'tempering' the expansionist trend of the monetary policy, also stating the Fed would not allow monetary conditions to tighten for a long period (at least until 2015). Despite this careful and diplomatic phrasing, international financial markets almost immediately afterwards went through a series of 'temper tantrums' which caused an abrupt jump in bond yields. Only after 3-4 months, financial markets calmed down when it was evident that the Fed did not change the pattern of monetary policy, continuing its $ 85 trillion of monthly bond purchases*. It was a shocking proof that some of the most important economies in the world had already become addicted to UMP!*

In this context, it is not surprising the Annual Report of the Bank for International Settlements (BIS) for 2016/17, after seven years since the 'official' end of the GFC, underlines that "policy normalization presents unprecedented challenges, given the current high debt levels and unusual uncertainty". Therefore, "in determining the pace of normalization, central banks must strike a delicate balance. On the one hand, there is a risk of acting too early and too rapidly (…). On the other hand, there is a risk of acting too late and too gradually." At present (2017) it seems there is a quasi-consensus as regards the stages of the *normalization process* (NP): firstly a gradual increase of the monetary policy interest rates, so that negative or near zero rates would be eliminated step by step (the so-called 'lift off'); secondly the size of central banks' balance sheets would be gradually diminished, hoping to reach the proportions existing in the pre-GFC period, by the *'unwinding'* of balance sheets (quantitative tightening).[61]

Obviously these are only 'desirable' principles, the determinant factor being the effective evolution of the nominal/real tandem, so important for contemporary economies. Consequently the necessity of 'normalization' is perceived with different intensities, varying from a central bank to another. Referring to the central banks this study focused on, a descending order of the NP intensity could be perceived as follows: Federal Reserve System, Bank of England, ECB, Bank of Japan.

In USA, after the strange 'temper tantrums' of 2013, the Fed (chaired by J. Yellen since February 2014) elaborated and published its normalization approach in September 2014 – *Policy Normalization Principles and Plans* (with additional details in March 2015). After seven years of about zero policy rates, Federal Open Market Committee (FOMC) raised the federal funds rate to 0.5% in December 2015. There followed other increases: to 0.75% in December 2016, to 1% in March 2017 and to 1.25% in June 2017. The Fed finished its quantitative easing (QE) program in 2013, but it has still been keeping almost $ 4,500 trillion of debt on its accounting books. However the Fed would not begin selling its debt until it 'normalizes' rates at 2%. Phasing out of deflationary tendencies (inflation rate increased from 0.3 % in 2015 to 1.4% in June 2017) and diminished unemployment rate (although based on a decrease in productivity) have allowed a more advanced NP in USA. Nevertheless there are American experts that consider the present monetary stance as

[61] *A too large expansion of a central bank's balance sheet will reduce the flexibility of the instruments of the monetary policy, having as a result rigidity in the central bank's policy (narrowing its room of maneuver).*

'hawkish': "Deflation in an economy as debt-burdened as ours is could be catastrophic."[62] Indeed, the US total federal debt has represented almost $ 20 trillion in mid-2017 (a 117% increase since 2007).

In UK, despite some debate on NP toward the end of 2016, the sluggish GDP growth in the first half of 2017 (around 1%), against the backdrop of 'Brexit', determined a difficult trade-off between slow growth rate and a jump in inflation rate (from about 1% at end-2016 to almost 3% in mid-2017). Under these conditions, the Bank of England's Monetary Policy Committee (chaired by Mark Carney, Governor) maintained a rather surprisingly low Bank Rate at 0.25% (at its meeting in early August 2017): "Monetary policy cannot prevent either the necessary real adjustment as the United Kingdom moves towards its new international trading arrangements or the weaker real income growth that is likely to accompany that adjustment over the next few years. Attempting to offset fully the effect of weaker sterling on inflation would be achievable only at the cost of higher unemployment and… even weaker income growth."[63] However a split appeared among the Bank of England policy makers, confirming the hesitant stance of the normalization process.

The Eurozone economy witnessed a very sinuous recovery after the GFC. The gradual decrease in the multiple set of interest rates specific to the ECB monetary policy started in November 2008 - from 3.75% to 3.25% for main refinancing operations - and reached 0% in March 2016, including a negative rate for deposit facility (-0.4%). At the same time, ECB's balance sheet impressively expanded to compensate the malfunctioning interbank market. The sovereign debt crisis of 2011-12 determined ECB to lengthen the maturity of its operations to 3 years (in November 2010).

The 'temper tantrums' mentioned earlier had an echo at the EBC: since July 2013, the Governing Council decided to provide *forward guidance* on the path of ECB's monetary policy, especially regarding the interest rates. Taking into consideration the subdued financial and economic climate, the ECB Governing Council has postponed any direct step towards NP. The only relative exception was a reduction of the 'asset purchase programme', from EUR 80 billion to EUR 60 billion of government & corporate bonds per month (at least until December 2017). In fact, Peter Praet, member of the Executive Board, emphasized that "monetary policy can bring output back to its potential level…, but it cannot durably raise long-term growth… That requires further, determined progress with structural and institutional reforms."[64]

The opinion mentioned above was already conformed by the specific evolution of *the Japanese* economy and financial system which anticipated the UMP with over a decade. After the burst of an asset bubble in 1989/90, Japan recorded a 'lost decade' of stagnation & deflation: "As a result, conventional monetary policy tools had been exhausted by around 1997/98, when anxiety about the financial system due to crisis reached its peak."[65]

The first 'traditional' instrument used to counteract the deflationary trend was the Bank rate which decreased from 6% in August 1990 to 0.25% in September 1998 and 0% in February 1999. In fact, that was the start for using *unconventional* monetary policies: in 1998/99, it was set up a comprehensive framework aiming at 'temporary' nationalization and injections of capital based on public funds. The international boom – mainly of a speculative nature – allowed the policy rate to increase to 0.5% in February 2007. But that was a short-lived illusion. The GFC brought back the Bank's rate to 0.1% in December 2008, followed by a 'stagnant recovery'. Therefore the policy rate came back to 0.0% in October 2010 and even -0.1% since February 2016.

It became obvious ever since the early 2000s that the policy rate exhausted its capacity to fight deflationary trend and stagnation. So, between 2001- 06, *quantitative easing* (QE) provided 'ample liquidity' to monetary and financial system (exactly when USA and UE economies witnessed a huge speculative boom). However the burst of GFC worsened the situation of Japan's economy. In April 2013, the Bank of Japan introduced the so-called *quantitative and qualitative easing* (QQE), implying the Bank's strong commitment for price stability and downward pressure on interest rates along all the yield curve through massive purchases of Japanese government bonds (JGB). In January 2013, it was adopted the price stability price target of 2% inflation rate. Yet, at least until

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[62] *J. Mauldin, Thoughts from the Frontline, Newsletter, July 22, 2017.*
[63] *Bank of England, Inflation Report, August 2017.*
[64] *Market Watch, June 8, 2017.*
[65] *H. Nakaso, "Japan's Economy and Monetary Policy", Bank of Japan, July 8, 2014.*

the July 2017 meeting, the Bank of Japan postponed several times the schedule for achieving that price stability price. Within this context, "Japan is seen as a leading indicator of the problems facing advanced world economies[66] Meanwhile the Bank would be continuing its QQE program with Yield Curve Control "as long as it is necessary ". Under these circumstances, any discussion or declaration about tempering or unwinding (balance sheet) could be only hypothetical.

The review of the UMP undertaken by the most representative central banks in the developed economies has showed relevant experiments characterized by many contradictory facts and trends which demonstrates that UMP are no longer an 'emergency' approach for a short term special situation but have become a 'fixing' for a deeply troubled monetary & financial system (both at national and international levels), with a grave impact on real economy. Previously considered an unfortunate 'exception' of the interwar period (especially the 1930s), the famous *liquidity trap* has become a daily fact for many countries. To use Mervyn King's phrasing (Governor of the Bank of England, from 2003 to 2013), "the market economy cannot coordinate spending plans… There are too many missing markets. As a result, a market economy is not self-stabilising, leading to occasional sharp ups and downs in total spending.(…) Even if monetary policy could lower real interest rate into negative territory, there is no guarantee that demand would pick up." [67] It is even shocking that a person who had a high position in the banking system has drawn the following conclusion: "… There is nothing special about finance that requires us to abandon rational argument and leave our future in the hands of the gods of finance. (…) For many centuries, money and banking were financial alchemy, seen as a source of strength when in fact they were the weak link of a capitalist system. A long-term programme for the reform of money and banking and the institutions of the global economy will be driven only by an intellectual revolution."[68]

If this crucial objective would be continuously postponed by the monopolistic financial occult forces, then the 'intellectual revolution' could be replaced by ever graver social turbulences. The serious limits and drastic mistakes of the former soviet-type state socialism will not permanently excuse the excesses and disequilibria specific to transnational oligopolistic state capitalism. As Hyman Minsky peremptorily demonstrated, the central banks and different instruments of financial control appeared and extended as a reaction to the embarrassing incoherence of the financial markets – an incoherence which strikingly indicates that 'free markets' cannot be considered a u*niversal prescription for economic policy* in the case of the economies based on financial capital institutions: *instability is an inherent and unavoidable weakness* for capitalist economy.[69]

The re-creation of the organic interlinks between the nominal and real dimensions of the economy could give a chance to effective *normalizing macroeconomic policies* (not only monetary policies), including a fair relationship between personal, corporative and public proprieties, based on considerations regarding both economic and social criteria.

Bibliography

Hyman P. Minsky, Stabilizing an Unstable Economy, McGraw Hill, 2008

Mervyn King, The End of Alchemy, Ed. Little, Brown, London, 2016

* * *, Bank of England, Financial Stability Report & Inflation Report, collection 2016/17

* * *, BIS, Annual Report, 2016/17

* * *, IMF, Global Financial Stability Report, October 2016 & April 2017

[66] *B. Bernanke, "Some reflections on Japanese monetary policy", May 23, 2017.*
[67] *M. King, The End of Alchemy – money, banking and future of the global economy, ed. Little, Brown, London, pp. 301/302.*
[68] *Ibidem, p. 289 and p. 369.*
[69] *H. Minsky, Stabilizing an Unstable Economy, 2008 by H. P. Minsky (especially Part III – Economic Theory).*

FINANCIAL AND BANKING PROBLEMS FACING ROMANIA IN THE CURRENT AND FUTURE PERIOD

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Abstract

We are currently witnessing the confrontation with many financial-banking problems globally, problems with a direct impact on Romania in the current and future period. A first aspect that we reflect in this research paper is the presentation of the relationship between financial intermediation and disintermediation, namely the value of credit relative to GDP. Another aspect presented in the paper reflects the comparative analysis of the rate, respectively the interest rates on loans and deposits in Romania and other countries. From which we can conclude that at a high borrowing rate and a so low deposit ratio (as a result of comparative analysis in Romania and other countries), it is hard to assume that Romania can start a sustainable growth, as the financing is difficult in the first place the cost of credit as a result of the impact of the crisis on country risk. Another aspect that we detail in the paper is the impact of the euroisation of the national economy and the coexistence of 2 coins (leu and euro) with money function in quasi / no / euro on the development of the Romanian economy / depreciation. By presenting the current financial and banking aspects that we face at national level, we can contribute actively to policy orientation towards the creation of sustainable economic development mechanisms.

Keywords: financial intermediation and disintermediation, interest, sustainable development, financial technology.

JEL classification: G21, Q01

Introduction

For many years, government policy and international non-governmental organizations have been pursued and partly implemented, several initiatives to support and consolidate SMEs, guarantees for government loans (e.g. Small Business Administration -SBA in the US), direct lending by state-owned banks (e.g. the British Business Bank), initiatives to simplify core requirements for SMEs, tax incentives to provide SMEs with capital, the direct subscription of alternative lenders (e.g. insurance companies, asset managers), institutional exchanges (e.g. SME-covered bonds, stock markets for SMEs), consolidation initiatives on securitization of markets, attempts to support private placement markets. Despite all efforts, there is still a significant funding gap. FinTech has become a strong trend, and FinTech is a frequently used term, referring to companies that provide or facilitate financial services using technology. "

Worldwide debt in 2017, according to Business24, reached a record high of $ 233,000 billion in the third quarter of 2017, according to an analysis published on Thursday by the International Finance Institute (IIF), the world's largest lobbying group in the financial sector. the conditions in which the debt of the non-financial private sector has reached new highs in Canada, France, Hong Kong, South Korea, Switzerland and Turkey. This figure includes the total debt of households, governments, the financial sector and non-financial companies. At the same time, the IIF points out that while the total debt increased by $ 16,000 billion in the third quarter of 2017 compared to the end of 2016, the debt-to-GDP ratio declined for the fourth consecutive quarter as the world economy has expanded. According to IIF, this ratio is now about 318%, three percentage points below the peak recorded in the third quarter of 2016. "A combination of factors including a global over-synchronized growth potential, rising inflation in China and Turkey and efforts to prevent a destabilizing accumulation of debt in China and Canada all contributed to this decline, "the IIF report said. According to the IIF, China, which was responsible for most of the emerging markets' new debt, slowed the pace of new debt accumulation, so last year its debt rose by just two

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percentage points to 294% of GDP, with an average annual growth of 17 percentage points in 2012-2016. IIF analysts warn that the debt burden could act as a brake on central bank intentions to raise interest rates, given the concerns that exist about the ability of firms and governments that are heavily indebted to secure debt service.

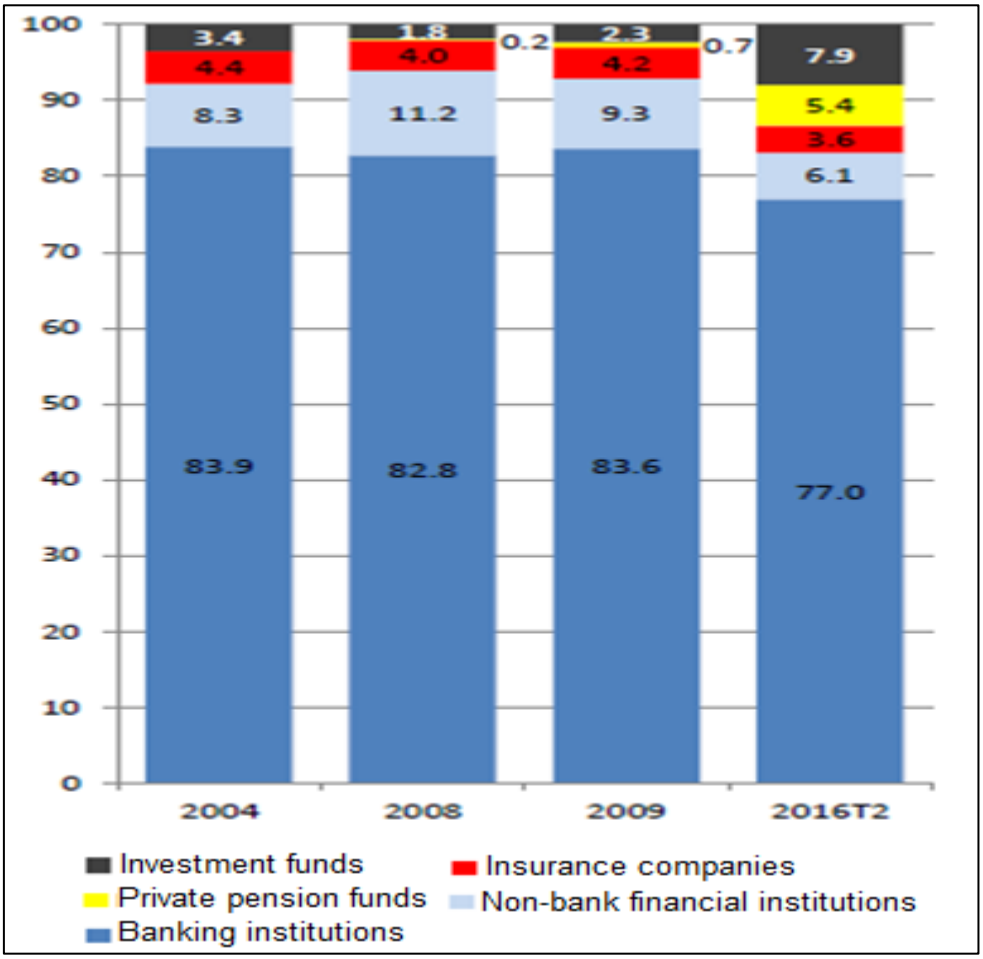
Methodology of Scientific Research

To substantiate the funding model for innovation, we used observation and examination tools, research methods based on the basic principles of scientific research, and we also created procedures based on factual analysis as a result of a significant practical experience and of intensive documentation at the level of national and international literature.

Research Results

In order to be able to formulate opinions on the current financial system, we need to carefully analyze the figures presented at both national and international levels, relying on several indicators such as the assets of the banking system - dominant at the financial sector level.

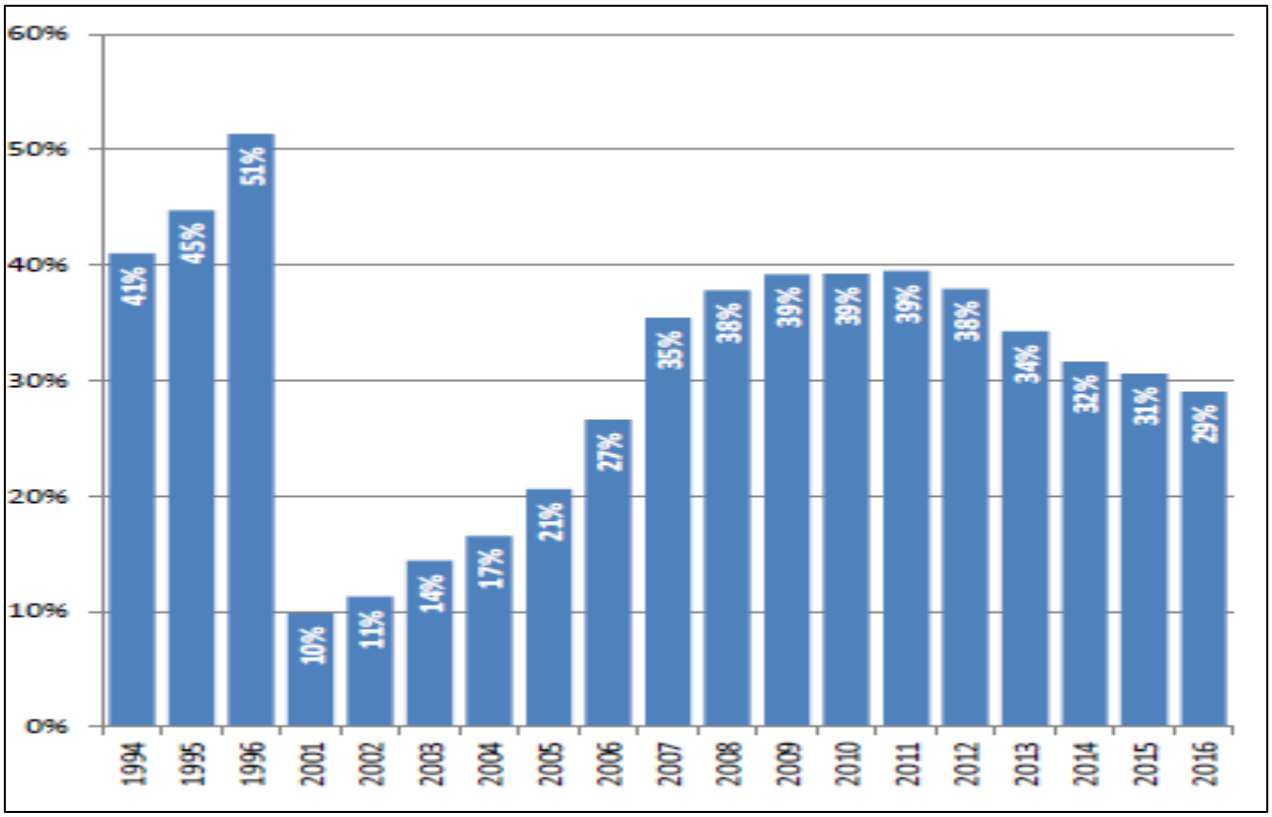
Figure 1 - Structure of financial system assets



Source: National Bank of Romania, 2017

In 2008, the cumulative assets of the banking sector and IFN accounted for 94% of the total (insurances represented 4%, the capital market was 1.8%). After 2009, there are structural changes in the financial sector assets, namely: the 11% reduction in the share of banking sector and IFN assets (to 83%), the increase by approx. 6 pp of the share of assets related to the capital market (investment funds) 7.9% and the increase by approx. 5 pp of the share of private pension funds assets (to 5.4%).

Figure 2 - The level of banking intermediation advanced rapidly after 2004



Source: National Bank of Romania, 2017

After 1990, in the process of economic reforms and with a non-modernized banking system, the intermediation rate ranged between 41 and 51% (1994-1996) matching the NBR's sources.

The next period 1997-2000, after the profound restructuring of the banking system the degree of intermediation fell to 10%. But the period of acceleration of privatization of banks followed, including foreign capital flows, which generated the leap of intermediation to 38% in 2008.

The post-crisis period brought a sharp contraction of brokerage (29% in 2016), amid a massive reduction in resources attracted from parent banks and a generally workable lack of demand, especially in strategic areas such as agriculture and rural development considered as a sector with banking risk.

Compared to large financial institutions that are often slowed down by old processes and an inert culture, start-ups are able to do so by promoting more radical innovations. FinTech has gained a significant attraction in recent years. Global investment has multiplied in 2014, reaching an investment volume of over $ 12 billion. Looking at global IT spending, which was estimated at $ 215 billion for 2014 (including hardware, software, domestic and external IT services), the advantage is obvious. Loans represent a major sub-sector of FinTech, thus total investment in FinTech, 27% went into consumer lending and 16% in business lending. Corporate credit companies include Zopa, Credit Club and SoFi, while companies such as OnDeck or MarketInvoice lend especially to small businesses.

In addition to debt financing, online crowdfunding platforms such as Seeders, Crowdcube or OurCrowd link companies and investors who want to help finance small businesses or newly created businesses by providing a form of equity. Also, bank transfer services provided by banks and brokers were the only means available to make money transfers before FinTech suppliers appeared. Companies like WorldRemit, Kantox or CurrencyFair offer international money transfer and currency exchange, services that involve advances in technology, leading to faster and cheaper solutions.

Mobile payments enable people to make mobile or personal mobile transactions (companies such as M-Pesa (Kenya) or EcoCash (Zimbabwe) are responding to the current challenges, notably in terms of innovation in mobile phone payments. this technology aims to revolutionize the very

concept of money itself. We'll encounter trading platforms where FinTech's capital market providers have grown in popularity. For platforms like eToro, retail investors can provide information and invest directly in a range. In recent years, the business-to-business (B2B) segment of the virtual space has received increased attention. In the years to come, the potential can significantly increase in this segment with new types of revenue-generating activities that still have remains unexploited.

FinTech has the potential to become an important player in financing small businesses. Appropriate funding access remains one of the most important ingredients for the success of SMEs. Over the past few years, a growing number of business products and models have emerged, thus meeting the needs of small businesses, prefiguring a paradigm shift in finance for small businesses. At that time, financial technology provided the nucleus of innovation with potential for significant growth in access to finance for small businesses. While the limits are sometimes fluid, five key products for financing small businesses are highlighted:

A. peer-to-peer loans;

B. Funding of traders and e-commerce;

C. invoicing financing;

D. financing the supply chain;

E. Trade finance.

Together, using these solutions can have enormous positive effects on the balance sheet of SMEs, leaving smaller businesses more cash, better working capital management and more stable and secure funding.

Peer-to-peer loans - this type of loan was introduced with the first platform launched in 2005, the PP or peer-to-peer (P2P) market becoming a global marketplace with a multitude of customized, and with a high estimated growth rate. In general, the credit market refers to the practice of lending money to borrowers without going through a traditional financial intermediary such as a bank.

FinTech solution

Lenders on the market aim to provide innovative solutions that banks cannot do. This is due to a number of factors that determine their model of operation.

First, the unsecured loan is the most common form of lending to the market so far. As such, there is no required warranty. Small businesses especially benefit from this, especially in the services sector. Often, such businesses have fairly stable cash flows, but no real collateral, and banks can borrow in these conditions.

Secondly, market creditors are not funded as a classic and much regulated financing process for money depositors. In contrast, in fintech financial services, sources come from funds from retail or institutional investors with an increased risk of appetite; these are Fintech's main financiers.

Third, market creditors apply innovation credits based on innovation and less on scoring items. Such models are heavily based on data, use semi-automatic risk assessment methods and stimulate non-traditional data points. Sources may range from online business rating such as Yelp, LinkedIn's social network, or satellite data to assess the level of wealth in a particular area. This allows credit risk assessment, if banks do not traditionally develop innovations to do so, especially in markets with limited credit (office information). Unlike the consumer market, loans, however, always involve a certain degree of human decision.

The fourth factor is given by the fact that FinTech suppliers operate with a reduced operational configuration, without maintaining a certain branch of activity and less staffing to make underwriting decisions. They can therefore lend competitive rates or incur credit losses at a certain level and with high risk potential for which they have subscribed.

Overview of the market compared to total bank lending to SMEs with a market of over 14 trillion dollars, while SME lending on the market is still limited in size and scope. Globally, market lending for $ 60 billion to $ 70 billion in outstanding borrowing volumes in 2014 was recorded. The countries with the largest SME lending volume in terms of volume include China, The United States and the United Kingdom. Since 2014, China has been the largest country with a volume of

loans issued through creditors on the market. Based on estimates, the market lending volume exceeded Yuan RMB 250 million (Chinese renminbi), or $ 40 billion in 2014, the number of platforms on the market rising to an impressive number of 1,575 platforms compared to only 20 in 2011, the number of these platforms being over 2,000.

The United States has reported over $ 5 billion in new loans for SMEs through fintech market platforms in 2014, while a volume of over $ 12 billion has been reached in 2015. Among the most relevant platforms since 2014 we mention OnDeck ($ 1.2 billion), CAN Capital ($ 1 billion), Kabbage ($ 400 million), Merchant Cash & Capital ($ 277 million), and Strategic Funding ($ 200 million).

This leaves significant potential untapped. According to estimates, Morgan Stanley and Goldman Sachs market lending to SMEs through fintech technology would be about 180 billion USD. An annual SME loan of 47 billion dollars can be reached in 2020, which will account for 16% of the total SME loan issue.

The UK market is more fragmented, with over 40% in different operating platforms. Among the finest operators we mention on RateSetter ($ 457 million) and LendInvest ($ 236 million).

Existing infrastructure is often a prerequisite for market models to work, especially for fintech models. This includes a payment existence and banking infrastructure, which all players need to use. Also, the technical infrastructure, such as the basic one, namely the internet or mobile connectivity, is particularly necessary especially for the fintech business model.

Alternatively, and outside of the official banking system, mobile money-laundering solutions such as Mobile-Money in Romania and Kenya are slowly gaining market share. However, so far, they have not reached a mature scale in financing small businesses. As a result, market lending now offers bank and "non-bank" solutions, in relation to total non-bank corporations or informal micro-enterprises. The availability of bank borrower analysis data is another requirement for the lending market. Data may come from credit bureaus, SME balance sheets, or electronic accounting systems.

In many cases, market creditors will have to mobilize data from alternative data sources, such as mobile, social media and behavioral models. However, classical analysis data is still preferred. Typically, more data is available, specifically on risk assessment and interest rate cuts, and can be offered differently depending on each type of client.

As far as financial regulation is concerned, fintech platforms in many jurisdictions initially started to operate in a "gray area", given that the legislation on market lending is not yet in place. This usually corresponds to a critical threshold, where innovation goes from "too small to be taken into account" to "too big to ignore."

However, in order for fintech to be accepted by the market, three central actors are needed:

a. Firstly, there must be a number of well-maintained platforms and appropriate operating systems. In general, the existence of a larger number of platforms will help to spread awareness among borrowers and increase competition. Improvements can also be made, including lower operating costs, better customer service (such as video tips) or a wider range of loan products. Increasing competition will force lenders to offer more at competitive prices. Similarly, in the classical lending market, perceived interest rates have declined considerably in recent years (Manta O, 2017).

b. Secondly, private equity providers are needed to provide sufficient funding for sustainable SME development. Globally, institutional investors hold $ 62 billion of financial assets under management - which may be sufficient to close the SME financing gap more than 20 times. Investors need to be aware and trust in the existing forms of credit in the market. Preferably, investors should invest not only on a loan but also to invest higher amounts to invest for a longer period of time. For example, Blackstone had committed $ 300 million to be lent to Prosper. Victoria Park Capital announced it will invest up to 230 million euros through Zencap, a European platform. However, many such institutional creditors need a high level of expected return on their investment and the risk they take. The expected results may vary, with yields ranging from 5% to more than 10% per year. Therefore, a critical challenge for many FinTech companies as suppliers is to provide sufficient attractive return for these investors, while on the borrower side they need to be more competitive than banks with low historical refinancing rates.

c. Third, debtors of small businesses must be willing to address the lending markets in their search for funding. This requires both awareness of the availability of market finance and knowledge of how to access them. Since SMEs do not see that managing finance is actually their force, many never start looking for new information and instead rely on their bank's advice - even if the bank declines their credit demand. As a recent UK survey showed, most SMEs that did not get credit from their bank never came to any other source. Therefore, active involvement in education and information on credit markets, such as available funding sources, which are needed to fund their work, must be actively involved. Beyond awareness and knowledge, SMEs must also have the confidence to use this new financial market as a source of funding.

Process facilitators can help players interact perfectly.

By optimizing the investment process, intermediary parties can help bring extra liquidity to the market. Some innovative firms address the financial problem through SME education. The American company NerdWallet aims to provide high-quality online content on alternative sources for consumers and small businesses to rank based on Google searches. The reason for this is that many small businesses start their financial tracking activity based on web searches.

Third-party service providers facilitate the process and increase integration. KYC and security providers help verify user identity. Data aggregators (e.g., Yodlee) synchronize with users' financial data from different sources and integrate with bank account information from different financial institutions, with data easily accessible. Cooperation and partnerships can help increase market access for creditors. This can take many forms; in partnerships between banks and platforms (eg Royal Bank of Scotland and Circle Finance). Moreover, the integrated cooperation between institutional investors and platforms, respectively, the bank assumes a substantial amount of capital to be lent to the platform. Already in 2012, Goldman Sachs provided a significant portion of a $ 100 million credit facility for OnDeck SMEs. A secondary market for SME lending can help create additional investment demand. The ability to resell credits allows investors to get out of their investments before maturity. Some companies already have a second trading platform for the loans they have created. One of the most advanced secondary markets is in China, where the secondary trading volume in March 2015 reached almost one-third of all new market lending. Financial securitization markets allow structured risk transfer and pooling of credit. In the European Union (EU), the specific objective of stimulating SME securitization is managed through certain programs, such as the SME Initiative Program, with a common funding, being an instrument of the European Investment Bank (EIB) and of the European Investment Fund (EIF), which aims to stimulate SMEs to finance by granting a partial loan for the risk to SMEs. However, most current solutions are adapted at the bank level through interim securitization. However, for large commercial banks, obtaining liquidity on secondary markets is now less challenging. For example, the amount of guarantees for securitized SMEs under the European Investment Fund (EIF) credit enhancement program with less than one billion euros a year. Finally, most of the current European proposals are mainly adapted to "high quality securitization". However, this approach may again exclude the most credit-intensive segment - SMEs that have no access to the bank or bank with the best possible rating based on traditional bank rating criteria. However, this instrument - embedded in ongoing initiatives to redeem the SME securitization market - could continue and stimulate the growth rate of loans on the SME market.

Systemic inherent risk may be unpredictable

The recent loan default credit default swap creates a "market with interest for SME failures", similar to the 2007-2008 financial crisis. In countries where withdrawal is at all times guaranteed to investors (for example, in China), this could be possible and would trigger an unpredictable, vicious circle. Platforms need to sell loans to provide liquidity in a declining market, similar to that of banks. To some extent, this was noticed during the collapse of China's summer capital market in 2015.

P2P platforms provided trading facilities, which had to be closed as support market conditions. As a remedy, third party insurance is that it has to provide security, but in case of major disturbances, insurance providers may fall. Finally, hedge funds have recently begun to take leveraged investments and buy loans on the market, thus increasing the risk from a systemic perspective.

In China, the development of the FinTech market has been made precisely because of the more relaxed regime of data confidentiality. This allowed Alibaba to rely on their data on millions of

consumers to extend their loan offer to small businesses. However, it cannot be ruled out that, implicitly, China could adopt stricter privacy and data security measures in the future.

Perspectives and trends

The current market lending landscape is expected to change significantly in the coming years, i.e. the consolidation of market creditors is expected. Moreover, it is expected to internationalize the players. Recently, OnDeck entered the Canadian and Australian markets. However, while a common data and technology platform can usually be easily transferred to new markets, divergences in regulatory requirements and different customer behaviors limit the speed of expansion. Over time, another formalization of the industry is also expected. From our point of view, industrial clusters such as the Peer-to-Peer Financing Association in the UK need to be formed.

Banking response to new challenges

At the same time, banks have become very aware of the opportunities of financial technology - and challenges their traditional business model lending to small businesses. According to an industry survey in August 2016, 68% of bank respondents said their lending to small businesses is in danger. Some banks will try again to increase SME lending in order to capture some of the available market share. Wells Fargo, for example, launched a widespread "Wells Fargo Work" initiative to place 100 billion dollars in new small businesses, i.e. loans until 2018. Internally, banks will have to further streamline processes for make small business lending more cost-effective.

Bank of China has built a "credit facility", especially for small business loans, with the standardization of internal processes. As a result, only four levels of management are involved in approving a loan, compared to up to 10 levels previously. And sometimes it took several months to process loan applications, now it only takes an average of four business days. In this way, more than 200,000 SMEs have already been served. At the same time, implicit levels remained comparable to credits for larger businesses. Others will track internal innovations and evolve under online models and under the umbrella of their licensed banking services. In June 2015, Goldman Sachs announced the launch of an online platform for lending to small businesses. Funding was provided by the bank, the New York State Branch.

Instead of pursuing internal development, banks can also directly acquire market creditors to keep technology or the team, a practice often called "rapid adaptation."

It is still hard to predict where the industry is heading in the next few years. However, estimates are significant, i.e. changes in the market landscape for loans to small businesses are certainly expected - ideally with a positive effect on them (Manta O, 2017).

The New Role of Public Institutions - National and Local at International Level

Few industries are as regulated as in the financial industry. The question whether and how quickly FinTech players can replace traditional business models therefore critically depends on the role that regulators, governments and international organizations choose to play. These actors, however, are in a biased situation. While FinTech has a tremendous potential to improve the situation for small businesses and entrepreneurs, regulatory authorities must also maintain their mandates, covering:

- Financial stability;
- Prudential regulation;
- Conduct and fairness;
- Competition and development.

A country where government institutions seem to have found a constructive path in the middle is the UK. The Financial Conduct Authority (FCA) is positioned as a leader in a prospective exercise to establish the best framework to support FinTech while developing a competitive and solid banking industry. Looking east, China has recently issued comprehensive guidelines for FinTech's development, a differentiated market that allows both existing operators and FinTech Start-ups to function.

In order for all stakeholders to benefit from the positive benefits that FinTech's industry can generate, key objectives and principles are essential for FinTech regulators, governments and players.

Basic principles for FinTech companies

While supporting actions by regulators and governments are critical, FinTech companies also need to contribute their share of creating a collaborative environment.

Compliance: FinTech must always comply with the strictest standard available. This will not only prevent costly adjustments to their business model later, it will also signal the desire to cooperate with regulators. The company that found out this was Prosper creditor. In 2008, the US Securities and Exchange Commission found that Prosper Dependent Borrower issued credit notes that were securities that had been sold without registration or applicable exemption. The action was "stop and quit", the letter of November 2008 that effectively stopped Prosper with all the money borrowed, and asked the company to fully re-launch its business - which is finally succeeding, setting a precedent for many fintech players (Manta O, 2017)

Organization: Regulators often criticize fragmentation from the FinTech landscape. "Whom I call if I want to talk about peer loans," said the executive director of a regulatory body complains. Some verticals of the industry began to be organized at national level. Meanwhile, in the UK, the UK P2P Finance Association (P2PFA) has become a credible partner player and conversation for civil servants. P2PFA represents over 90% of the UK peer-to-peer loan market, including consumer lending, business crediting, and billing. Its membership base includes all major national players such as Funding Center, LendInvest, MarketInvoice, RateSetter, ThinCats and Zopa.

Opportunities for development finance institutions

A group of institutions that have significantly contributed financially to SMEs in the past is international to IFIs such as the IFC, the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB) or the Bank (DFI), such as those based on the US, the Overseas Private Investment Corporation, the British CDC Group or the Dutch Bank for Development FMO. They are governmental organizations controlled by institutions that invest in sustainable private sector development projects in order to stimulate development in developing countries (Manta O, 2017).

Ways to support SME finance

Traditionally, a number of instruments have been applied by IFIs and DFIs: In many cases, DFIs provide direct funding to local banks, which is transferred to small businesses according to predefined criteria. A recent example is the $ 12 million loan from the EBRD to SMEs to a Belarusian private banking company. In other cases, DFI offers risk sharing, such as first loss items for certain tranche loans. In terms of capital, DFIs also take the equity investment or invest as a limited partner in private equity funds that offer venture capital to small businesses. Over the years, only the EBRD has invested in more than 150 private equity funds.

All investments must meet three general criteria: they must be additional, i.e. where investors are informed about the transactions - do not go to avoid "elimination"; they must be focused, i.e. attracting money from other investors to be viable, that is to ensure long-term viability. Given the complex nature of setting up and monitoring the contract and the agreement with local banks, usually the investments tend to have a volume of about $ 10 million up to $ 50 million.

Can FinTech change small businesses: FinTech has recently attracted public attention and could become one of the strongest tools to support small businesses and thus stimulate sustainable growth of global economies? Multi-product market lending solutions offer tremendous potential for improving small business financing because institutional capital is immediately available. Market creditors connect to risk-taking institutions for small businesses in need of funding. On the Internet platforms, payment processors and telecom companies can rely on existing business relationships and make use of customer knowledge. Funding through platforms can provide an effective tool to overcome the liquidity shortage and improve the small business capital situation. The online supply chain of finances will further integrate existing supply chains and lead to positive results for all parties involved. FinTech in trade finance is still at an early stage, but promises great potential to

unlock a global customer base for small businesses. Governments can set the right incentives and can provide direct support to help national industries develop through FinTech's solution.

Regulatory bodies can create positive and coherent cooperation in promoting innovative solutions. At the same time, however, it must ensure the protection of individuals and systemic viability by establishing appropriate framework regulations for this new form of funding (Manta O., 2017).

Some data provided to the NBR that should allow each of us to reflect and identify specialist's solutions:

1. From the total capital of Romania, at the end of 2014, the financial capital represents only 30% (70% non-financial capital - tangible and intangible assets);
2. Within the financial capital, foreign capital has become preponderant since 2008 and represents 62% in 2015 compared to only 38% of the domestic capital;
3. Foreign capital inflows over the period 2004-2008 (with an annual average of 14% of GDP) allowed for a sharp rise in the investment rate well above the saving → unsustainable current account deficits (14% in 2007 and 12 % in 2008) → substantial currency imbalance, which required major internal economic correction in 2009-2010 and funding of approx. EUR 17.9 billion from international financial institutions in 2009-2012 (from EUR 18.9 billion initially contracted);
4. fiscal pro-cyclical policies and boom-based revenue → accentuating the post-crisis budget deficit → tripling public debt, from 13% of GDP in 2008 to 37.6% of GDP in 2016;
5. The GDP per capita evolution of Romania in 2003-2016 and the comparison of its dynamics with other former socialist countries → NATO entry and EU accession were decisive moments for the development and modernization of the Romanian economy → was the only solution viable and efficient for the irreversible orientation of Romania towards the values of Western democracies with a reasonable cost-benefit ratio.
6. Monetary and prudential measures of the NBR have helped to strengthen the resilience of the banking system to shocks → Additional liquidity and capital buffers → Bank overrun of the recent crisis without the use of public funds → Maintaining financial stability;
7. Deep economic reforms applied after 1990, including the privatization of state-owned banks, foreign capital inflows, the crisis, massive outflows of post-crisis banks, the consolidation of the banking system → large fluctuations in banking intermediation -51% in 1996; 10% in 2001; 39% in 2009; 29% in 2016.

Bibliography

Alvarez, Fernando; Francesco Lippi (2009). "Financial Innovation and the Transactions Demand for Cash". Econometrica. 77 (2): 363–402. doi:10.3982/ECTA7451.

Allen, Franklin; Douglas Gale (1988). "Optimal Security Design". The Review of Financial Studies. 1 (3): 229–263. doi:10.1093/rfs/1.3.229.

Friedman, Benjamin M. (2000). "Decoupling at the Margin: The Threat to Monetary Policy from the Electronic Revolution in Banking". International Finance. 3 (2): 261–272. doi:10.1111/1468-2362.00051.

Goodhart, Charles A. E. (2000). "Can Central Banking Survive the IT Revolution?". International Finance. 3 (2): 189–209. doi:10.1111/1468-2362.00048.

Li, David X. "On default correlation: A copula function approach." Journal of Fixed Income 9, no. 4 (March 2000).

Duffie, Darrell; Rohit Rahi (1995). "Financial Market Innovation and Security Design: An Introduction". Journal of Economic Theory. 65 (1): 1–42. doi:10.1006/jeth.1995.1001.

Melamed, Leo (1996). Leo Melamed: Escape to the Futures (First ed.). Wiley. ISBN 0-471-11215-1.

MacKenzie, Donald (2006). An Engine, Not a Camera: How Financial Models Shape Markets. The MIT Press. ISBN 0-262-13460-8.

Manta, O. (2017): New challenges in economic science, ISBN 978-620-2-07721-7, editura LAP LAMBERT Academic Publishing, Germany.

Miller, Merton H. (1986). "Financial Innovation: The Last Twenty Years and the Next". The Journal of Financial and Quantitative Analysis. 21 (4): 459–471. doi:10.2307/2330693. JSTOR 2330693.

Myers, Stewart C.; Nicholas S. Majluf (1984). "Corporate financing and investment decisions when firms have information that investors do not have". Journal of Financial Economics. 13 (2): 187–221. doi:10.1016/0304-405X(84)90023-0.

Persons, John C.; Vincent A. Warther (1997). "Boom and Bust Patterns in the Adoption of Financial Innovations". The Review of Financial Studies. 10 (4): 939–967. doi:10.1093/rfs/10.4.939.

Ross, Stephen A. (1989). "Institutional Markets, Financial Marketing, and Financial Innovation". The Journal of Finance. 44 (3): 541–556. doi:10.2307/2328769. JSTOR 2328769.

Shiller, Robert J. (2008). "Derivatives Markets for Home Prices" (PDF). Cowles Foundation Discussion Paper no. 1648.

Tufano, Peter (2003). "Chapter 6 Financial innovation". The Handbook of the Economics of Finance. Volume 1, Part 1. Elsevier. pp. 307–335. ISBN 978-0-0804-9507-1.

Woodford, Michael (2000). "Monetary Policy in a World Without Money". International Finance. 3 (2): 229–260. doi:10.1111/1468-2362.00050.

CHARACTERISTICS OF CONTEMPORARY MONETARY POLICIES OF MAJOR CENTRAL BANKS IN THE POST-CRISIS DOMESTIC AND INTERNATIONAL CONTEXT

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Abstract

The global financial crisis has brought about the rethinking of monetary policy by central banks in developed and developing countries, in the sense of adding unconventional measures to traditional instruments. Among the reasons for this trend, there are, mainly, the distress of the abilities of standard measures to stimulate the economy in many developed countries, as well as the need to ensure financial stability and the functioning of financial markets. The analysis[73] shows that, in general, the analysed central banks have set as objective of monetary policy an inflation target of 2% by actions which should support sustainable economic growth, high employment rates and moderate long-term interest rates. Concerning the monetary policy measures enacted, it is noticed the pursuit of the monetary policy conduct from the previous years, namely the tendency to diminish the reference interest rate and the use of the unconventional measures of monetary policy in the context of the trends and forecasts related to the global economic and financial developments , of the conditions in the labour market, of the analysis of the inflationary pressures and expectations, given the general weakness of the real economy and the monetary dynamics, but also amid the high uncertainty on the prospects of the US and the European Union economies, due to the possible consequences of the Great Britain's exit from the EU.

Keywords: unconventional measures, objective of monetary policy, reference interest rate, sustainable economic growth

JEL classification: E52, E58, G01

Introduction

The global financial crisis has brought about the change in central banks' vision on monetary policy from the developed and developing countries by adding unconventional measures to the traditional instruments. Among the reasons for such action there are, mostly, the exhaustion of the abilities of the standard measures to stimulate the economy in many developed countries (the deterioration of the monetary policy channels on the background of the systemic financial tensions), after the monetary policy interest rates were reduced almost to zero, as well as the need to ensure the financial stability and the functioning of the financial markets.

At first, the unconventional measures represented an exception to the rule, but they gradually became a permanent component of the monetary policy, particularly in the developed countries.

Description of the Problem

The unconventional measures aim either at maintaining the financial stability or the macroeconomic stabilization. The unconventional measures of monetary policy entail the increase of the size of banks' balance sheets and the change of the structure of banks' balance sheets (Bernanke et al., 2004). The unconventional measures of monetary policy are divided into measures of quantitative easing (referring to purchases of long-term bonds by the central bank), with the effects of allocating liquidity on the secondary market and diminishing the long-term interest rate, and measures of credit relaxation (Bernanke, 2009; Lenza et al., 2010), which favours

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financial stability by allocating liquidity on the secondary credit markets and by the direct assistance of debtors. Therefore, the unconventional measures of monetary policy usually induce the change of the monetary basis or of the size of the banks' balance sheets, with impact on the economic activity and the consumer prices.

The innovations regarding central banks' funds are the most important source of unconventional measures of monetary policy.

The unconventional measures can be also classified according to the market on which they are implemented (measures of the foreign exchange policy, measures concerning sovereign debt management, measures regarding the policy of credits, measures regarding the central banks' reserves policy).

The extent of using unconventional measures of monetary policy has hung upon the nature of the problems that the central banks have been facing, depending on the degree the developed and developing countries have been affected by the global financial crisis. The countries with emergent markets had to cope with problems associated to high inflation rates and high outflows of capital, which didn't allow large reductions of the monetary policy interest rate meant to stimulate the local economy. Even after the inflationist pressures have decreased, the developing countries still couldn't reduce the monetary policy interest rates close to zero because of the high risk associated to the national assets. Thus, while the developed countries could use large-scale repurchases of assets (quantitative and direct tempering of the credits), the emergent countries have used mostly indirect measures of mitigation of the credits (the central banks have expanded the list of parties and assets that can take part to transactions, have provided more liquidity to the commercial banks compared to the period before the crisis).

The main objections to the unconventional measures of monetary policy refer to practical problems regarding their implementation, their correlation with the traditional measures and their coordination with other macroeconomic policies.

Methodology and Data Sources

Hereinafter, the author aims to highlight the characteristics of the monetary policies adopted and implemented by the major central banks in the post-crisis domestic and international context. The article also intends to show the changes having taken place in the monetary policies compared to the previous years. The author analyses if the monetary policies decisions reflect the objectives of the central bank, presenting the instruments used by the central banks in order to enact their monetary policies.

The research methods used consist in comparative analysis, qualitative evaluations and interpretations.

The data have been taken from the central banks' statistics.

Results Obtained

In 2015-2016, in Sweden, Switzerland and Japan, the inflation rate has reached very low levels and signs of deflation have been noticed, which made the real interest rate to converge towards negative valules.

1. The Monetary Policy of the Bank of England

The Monetary Policy Committee of the ***Bank of England*** met in August 2016, after the decision of Great Britain to exit the European Union, which enhanced the importance of the decisions adopted. One can notice a combination of the European directions of action with the American ones. Thus, the Monetary Policy Committee of the Bank of England has set a 2% inflation rate target, as monetary policy ***objective***, through actions which should support the economic growth and employment. Among the measures adopted by the Monetary Policy Committee of the Bank of England meant to stimulate economic growth and the reach of the inflation rate target set (Bank of

England, 2016) have been: a 0.25 percentage points reduction of the reference interest rate (from 0.5% to 0.25%); another scheme for term financing to support the pass-through of monetary policy interest rate reduction; the purchase of national corporate bonds worth up to 10 billion British Pounds; expanding the scheme for asset purchases for the British government bonds by 60 billion British Pounds, so that the total stock of purchases of British government bonds reached 465 billion British Pounds.

The financing way of the last three measures by Central Bank's reserve issuance support the idea that the way of operation of the central banks' activity and the measures and manners of monetary policy implementation have changed compared to the previous period. The Bank of England began to use unconventional monetary policy measures in March 2009.

The measure of reducing the monetary policy interest rate is more of a beacon for the monetary and financial markets, showing the intention of the central bank to pursue its efforts to offset the deflationist displays, being less a pragmatic approach of the problems affecting the real economy. This measure seems to have an insignificant effect on the real economy, although it should call forth the decrease of borrowing costs for households and companies. "However, as the interest rates draw near zero, it is increasingly difficult for the banks to reduce further the interest rates for deposits, which limits their capacity to ease the credit conditions" (Mark Carney – governor of the Bank of England).

Being aware of this risk, the Monetary Policy Committee of the Bank of England launched the term financing scheme in order to support the pass-through of the monetary policy interest rate decrease, offering funds for the banks at interest rates similar with the monetary policy interest rate (0.25%). This can be an attempt to change the quantitative easing into credit relaxation in favour of the companies and, possible, of the households, but also an indirect way of stimulating the real economy. Some similar monetary policy initiatives, adopted after 2009, hadn't had the expected positive effects in the USA and in EU economies, with just a mere alleviation of the crisis effects. (Ionescu, 2016)

2. The Monetary Policy of FED

In the USA, the Federal Open Market Committee aims to accomplish its mandate set in its statute by the US Congress, namely to support high employment rates, price stability and moderate long-term interest rates. The Committee explains its monetary policy decisions to the public, as clear as possible, so as to allow the economic agents and the households to adopt well informed decisions, in order to reduce the economic and financial insecurity, to enhance the monetary policy efficiency (by strongly anchoring the long-term inflationist expectations), transparency and responsibility.

Given the interdependence between inflation, unemployment and long-term interest rates, on the one hand, and the financial and economic activity, on the other hand, the monetary policy decisions of the Committee reflect its long-term objectives, the medium term prognoses and the evaluations regarding the balance of risks, including the risks for the financial system, which might prevent the accomplishment of the targets set by the Committee.

The Federal Open Market Committee targets, on the long-term, a 2% inflation rate (measured by the annual change of the consumer price index). The Committee intervenes when the inflation rate remains persistently above or below this reference value. Setting an objective for the long-term inflation rate is possible due to its being influenced, mainly, by the monetary policy.

The maximum level of employment is mainly determined by non-monetary factors which affect the structure and dynamics of the labour market. These factors can vary in time and may not be measurable directly. Hence, there is no fixed target for the maximum employment rate; rather there are periodic evaluations of this indicator, which are used in the monetary policy decisions of the Committee.

Fed (US Federal Reserve System) started to implement measures of quantitative easing in November 2008, followed by others in November 2010 and in December 2012.

In the first half of 2016, the US monetary policy remained accommodative in order to support the improvement of the labour market conditions and the return to the 2% inflation target. The Federal Open Market Committee maintained the target interval for the rate of federal funds to 1/4-1/2%.

The unchanged position of the monetary policy has been supported, among others, by the Committee's evaluations of the global economic and financial evolutions during the first part of the year, which presumed risks for the economic perspective, and by the data from June 2016 which showed that the improvement of the employment rate has slowed down. The monetary policy conduct of the Committee reflected its expectations according to which inflation rate will remain low on the short-term, both due to lower energy prices and non-energy imports prices, but also on the background of the high uncertainty about the perspectives of the US economy, in the context of the possible consequences of the Great Britain's referendum concerning the exit from the European Union. On the medium-term, the Federal Open Market Committee presumed that the economic evolutions will allow only gradual increases of the federal funds rate. In order to make the future adjustments of the federal funds rate, the Committee had to take into consideration a wide range of information, including measurements of the labour market conditions, indicators for the inflationist pressures and expectations and the forecasts for the national and international financial evolutions (Board of Governors of the Federal Reserve System, 2016).

In order to maintain the accommodative financial conditions, in the first part of 2016, Fed kept at high levels its reserves of long-term securities. The Committee maintained the same policy of reinvesting the principal payments from the debt owned by the government and from governmental real estate securities into governmental mortgage securities. The Committee also "rolled" at auctions the Treasury bonds at maturity and it anticipates that it will do the same until the rate of the federal funds returns to normal.

On the background of continuing the Committee's reinvestment policy, the total assets of Fed remained around 4.5 trillion USD. The bonds owned by the US Treasury into the System Open Market Account remained to 2.5 trillion USD, and the holdings of government debt and government mortgage securities remained at about 1.8 trillion USD. Therefore, the total liabilities in Fed's balance sheet remained almost unchanged.

The revenues as interest coming from the portfolio of the System Open Market Account represented substantial remittances towards US Treasury.

In agreement with the Principles and Plans for Normalization of the Federal Open Market Committee' policy, published on September 17th, 2014, and supplemented with operational information at the Committee's meeting from March 2015, Fed continued to use the interest paid for reserves and a facility consisting in an overnight reverse repurchase agreement to manage the rate of the federal funds, and the effective rate of the federal funds remained within the targeted interval. Thus, the Board of Governors left unchanged the interest rate for the balance of the required and excess reserves, at 1/2%, while the Federal Open Market Committee continued to authorize, on a daily basis, overnight reverse repurchase agreements at the rate of 1/4%. These operations are done in an amount limited by the value of the Treasury bonds owned directly by the System Open Market Account, available for such operations and with a limit by counterpart of 30 billion USD per day. The total overnight reverse repurchase agreements done with Fed generally decreased in the first half of the year.

The Committee stated its intention to reduce gradually the overnight reverse repurchase agreements when they would no longer be necessary in order to help control the rate of the federal funds.

Furthermore, the discount rate (primary credit rate) remained unchanged, at 1%.

Fed continued to test the opportunity of other monetary policy instruments. Thus, in the first half of 2016, it run term deposit facility operations, seven days deposits being offered, with a floating interest rate of 1 base point higher than the interest rate for the excess reserves. The volume of the term deposits used in these operations was similar to those from the previous tests with similar parameters (Board of Governors of the Federal Reserve System, 2016).

Furthermore, the Federal Open Market Committee has done several low value exercises in order to maintain the operational efficiency.

3. The Monetary Policy of the European Central Bank

The main monetary policy objective of the European Central Bank (ECB) is price stability.

ECB's monetary policy decisions rely on the following instruments (ECB, 2016):

1. The key-interest rates set by the Board of Governors (interest rate for the main refinancing operations which normally supply liquidity for the banking system by tenders with fixed or variable interest rate; rate for the deposit facility used by the banks when making one-day deposits in the Eurosystem; rate for the marginal lending facility, which provides one-day credits for the banks from the Eurosystem).

2. Unconventional measures of monetary policy – as the financial crisis intensified in September 2008, ECB has implemented several unconventional monetary policy measures, unheard of in terms of nature, scope and dimension, with the purpose to defend the main objective, namely price stability, and to ensure a good transmission of the monetary policy. The European Central Bank adopted the procedure of quantitative easing as of May 2009.

At the meeting from July 4th, 2013, the ECB's Board of Governors announced that it expects that the key interest rates of ECB would remain at their current level or even decrease on a longer period of time. The expectations of the Board of Governors relied on the global perspective on the medium-term inflation rate, given the general weakness of the real economy and the monetary dynamics. At that moment, forward guidance helped the accomplishment of ECB mandate to maintain effectively price stability, within the framework and totally observing its strategy.

Also, the Eurosystem has the Emergency liquidity assistance procedure which allows the credit institutions from the euro zone to receive credit from the central bank not only by monetary policy operations, but also as emergency liquidity assistance. According to this procedure, central bank's money, or any other type of assistance, which increase central bank's funds, are supplied by any national central bank of the Eurosystem towards solvable financial institutions which have temporary liquidity problems, without considering these operations as part of the common monetary policy (ECB, 2016).

The central national banks of the Eurosystem are responsible for supplying emergency liquidity assistance (i.e. the associated costs and risks).

Also regarding the unconventional measures of monetary policy, the ECB's Board of Governors decided in its meeting from March 10th, 2016, to enlarge the range of eligible assets. As of June 8th, the Eurosystem would make purchases within the framework of the corporate purchases sector, and as of June 22nd, it would make longer term refinancing operations.

The ECB's Board of Governors took the following monetary policy decisions in its meeting from March 10th, 2016 (ECB, 2016):

- the interest rate for the main refinancing operations of the Eurosystem would decrease with 5 points, to 0%, as of March 16th, 2016;

- the interest rate for the marginal lending facility would decrease with 5 points, to 0.25%, as of March 16th, 2016;

- the interest rate for the deposit facility would diminish with 10 points, to -0.4%, as of March 16th, 2016;

- the monthly purchases within the program of asset purchases would increase to 80 billion EUR, as of April. This decision was reconfirmed at the meetings from July 21st, September 8th and October 20th, 2016, highlighting that the monthly purchases of assets worth of 80 billion EUR will remain at the same level until a sustained adjustment would be noticed in the evolution of inflation, adjustment compatible with the inflation target;

- the bonds denominated in euro, from the category of investments issued by non-banking companies from the euro zone, would be included on the list of eligible assets for regular purchases;

- a new series of four targeted refinancing operations on longer periods, would start in June 2016, each with a maturity of 4 years. The lending conditions for these operations can be as advantageous as the interest rate for the deposit facility.

The ECB's Board of Governors maintained its decisions on the interest rate for the refinancing operations, the interest rate for the marginal lending facility and the deposit facility, at 0%, 0.25% and -0.4%, respectively, at its meetings from April 21st, June 2nd, July 21st, September 8th and October 20th, 2016. The key-interest rates of the ECB were expected to remain at these values or even to decrease for a longer period of time, longer than the horizon of the net purchases of assets (ECB, 2016).

4. The Monetary Policy of the Bank of Japan

The **Bank of Japan** is the first central bank of a developed country which implemented measures of quantitative easing in March 2001, on the background of depression and deflationist trends from the late 1990s. By quantitative easing, the banks can build up excess reserves in the attempt to stimulate the growth of credits granted to economic agents. In the following years, the central banks from most developed economies adopted measures of quantitative easing within the context of the effects of crisis (recession and depression), of their duration and intensity.

The Bank of Japan supported the easing of the monetary policy in 2016 also, until reaching a 2% level for the inflation rate. According to the Governor of the Bank of Japan from 2013, Mr Kuroda, "there is no limit for monetary easing. There is still plenty of room for the Bank of Japan to buy government bonds, to decrease the interest rate or to buy other assets, such as government bonds, shares of real estate funds".

The Bank of Japan offered a huge monetary stimulus in 2013, by buying government bonds worth of 50 trillion Yen each year, increased to 80 trillion Yen in October 2014.

Despite this important monetary stimulus, the data from 2016 have shown a 0.4% decrease of the consumer price index compared to the previous year, and a slowdown of inflation, even excluding the volatiles prices for foods and energy (Harding, 2016).

The ***objectives of the monetary and fiscal policy*** of Japan consist in going beyond deflation and obtaining a sustainable economic growth.

In January 2016, the Bank of Japan adopted the *Quantitative and Qualitative Monetary Easing (QQE) with a Negative Interest Rate* Strategy with the purpose to accomplish the 2% target of price stability as soon as possible and to counteract the deflationist trends. The Bank would implement measures in three directions: quantitative, qualitative and interest rate (Bank of Japan, 2016).

Thus, the Bank of Japan applied, as of that moment, a negative interest rate of -0.1% at the current accounts which the financial institutions had with the Bank of Japan, with subsequent further reducing the interest rate on the negative side, if necessary.

The decision to adopt a negative interest rate was harshly criticised by the banks and by the public in Japan. Within the context of a negative interest rate, the financial conditions became more accommodative.

Regarding the quantitative dimension, the Bank of Japan decided to do open market operations in order to increase the monetary basis at an annual pace of 80 trillion yen.

The qualitative dimension implies purchases of assets, as follows:

- Japanese state bonds, their amount increasing by 80 trillion yen each year. In order to encourage the decrease of the interest rates along the entire yields curve, the Bank was to make the purchases in a flexible manner, in accordance with the conditions of the financial market. The average maturity of the purchased Japanese state bonds would be 7-12 years.

- the Bank of Japan would buy exchange-traded funds and Japan real estate investment trusts, worth of 3 trillion and 90 billion Yen, respectively, each year.

- the purchase of corporate bonds would amount to 3.2 trillion Yen per year.

Within the context of Great Britain's decision to exit the EU and of the slowing down of the emergent economies, the insecurity and volatile evolution on the global financial market perpetuated. Therefore, in order to offset the deterioration of trust in business and of consumer feelings, as well as in order to support the financing in foreign currency of the Japanese companies

and financial institutions, the Bank of Japan adopted the following decisions at its July 29th, 2016 meeting of monetary policy (Bank of Japan, 2016):

- increase the purchase of exchange-traded funds by 6 trillion Yen each year

- double the size of the lending program of the Bank of Japan, in order to support the growth in USD to 24 billion USD (about 2.5 trillion Yen). Within this program, the Bank of Japan offered capitals in USD for a period of up to 4 years, in order to support the overseas activity of the Japanese companies through financial institutions.

- the Bank of Japan would implement a new facility meant to lend Japanese state bonds to the financial institutions against their current account balances with the Bank, so that the state bonds could be used as collaterals for the operations of supplementing the USD funds.

The Bank of Japan left unchanged the provisions regarding the quantitative and qualitative dimensions and the interest rate policy.

On September 21st, 2016, maintaining price stability as main objective, by a 2% inflation rate, the Council for Monetary Policy of the Bank of Japan decided to implement a new framework for monetary policy, the "Quantitative and Qualitative Monetary Easing with Yield Curve Control" by joining the two frameworks of monetary policy which have been in force until then, namely "Quantitative and Qualitative Monetary Easing" and the "Quantitative and Qualitative Monetary Easing with a Negative Interest Rate". The new framework of policy consists in two major components: the first refers to yield curve control, which presumes bank's control over the short-term and long-term interest rate, while the second one refers to inflation-overshooting commitment, according to which the bank is committed to extend the monetary basis until the annual rate of increase of the consumer price index exceeds the 2% target for price stability and it remains, in a stable manner, above this target.

Through the policy of yield curve control, the Bank of Japan aimed to decrease the real interest rate by controlling the short-term and long-term interest rates.

As the monetary policy with negative interest rate, introduced in January 2016, improved the economic activity and prices evolutions, following the reduction of the real interest rates, and as the economy of Japan is no longer in deflation, it means that these policies are efficient in influencing the entire yield curve.

Actually, the Bank of Japan Banca took the following measures (Bank of Japan, 2016):

1. Yield Curve Control

A short-term interest rate and a target for the long-term interest rate were set. The Bank will further reduce the interest rates if it considers necessary.

In order to facilitate yield curve control, new instruments of open market operations were introduced:

- direct purchases of Japanese government bonds, set by the Bank of Japan (at fixed rate)

- fixed rate fund operations for maximum 10 years (extended from one year, as it was until then)

Regarding the short-term interest rate, the purchases of Japanese government bonds, the purchases of exchange-traded funds and of Japan real estate investment trusts, as well as of corporate bonds, will be done using the conditions set in January 2016.

2. Inflation target commitment

Using the Quantitative and Qualitative Monetary Easing with Yield Curve Control, the Bank of Japan will seek price stability and a 2% inflation rate. The growth rate of monetary basis might fluctuate on the short-term within the context of market operations aimed to control the yield curve. Following this line of monetary policy, the ratio between the monetary basis and the nominal GDP in Japan would presumably exceed 100% (This ratio is of 20% in the USA and the Euro zone).

The impact of the interest rates on the economic activity, prices and financial conditions depends on the shape of the yield curve. The following three ideas must be considered within this context. First, the short-term and medium-term interest rates have a more important impact on the economic activity than the long-tem interest rates. Second, the relation between the impact of the

interest rates and the yield curve shape may vary, since the companies try new ways of raising money by issuing bonds on very long terms under the conditions of monetary easing and negative interest rate. Third, an excessive decline and yield curve flattening may have a negative impact on the economic activity, producing a deterioration of the population feelings, since it may cause uncertainty regarding the sustainability of the financial activity in the broad sense.

In order to secure an appropriate yield curve, the Bank of Japan will have to take into consideration:

- the economic, financial and price conditions, including the extent to which the decreasing yields for the Japanese state bonds would drive the decrease of the active interest rates and of the corporate bonds.

- the effects of the decreasing yields of the Japanese state bonds on the economic activity, and

- the impact of decreasing yields of the Japanese state bonds on the financial conditions.

Mr Kuroda, Governor of the Bank of Japan, argued that the failure of reaching the 2% inflation rate target was due to the following shocks: the decrease of oil prices in the summer of 2014, poor domestic demand after the consumption tax was increased in April 2014, slower economic growth of the emergent markets in the summer of 2015 and the volatility of the global financial markets.

These shocks pushed down inflation also because in Japan, the consumers are used to prices that change very slowly, so that their expectation regarding inflation followed the prices downwards. In Japan, the inflationist expectations are backward-looking. Therefore, their wages demands were deterred.

Within this context, measures were adopted to ***stimulate the inflationist expectations***. First, the Bank of Japan has made a commitment to allow inflation to exceed the inflation target in order to strengthen the forward-looking mechanism in building up the inflationist expectations, increasing the monetary basis until the annual increase of the consumption prices exceeds the 2% target, and remains stably above it. It seems that the relation between the monetary basis and the inflationist expectations is rather on the long-term. Therefore it is very important the Bank of Japan's commitment to increase the monetary basis on the long term.

The enactment of the new strategy of monetary policy "Quantitative and Qualitative Monetary Easing with Yield Curve Control" goes in the same direction, allowing the Bank of Japan to make more flexible adjustments depending on the evolution of the economic activity and of the prices, as well of the financial conditions, with effects toward the improvement of the monetary easing sustainability.

The Bank of Japan also purchased national state bonds, which is also expected to increase the inflationist expectations.

Conclusions

The recent trend of financing the monetary policy measures by issuing central bank reserves supports the idea that the activity of the central banks as well as the measures and ways of implementing the monetary policy have changed compared to the previous period.

Furthermore, it was noticed that the monetary policies enacted after the onset of the international economic and financial crisis aim the accomplishment of more objectives than in the past, some even in the real sphere (offseting the degradation of business confidence and consumer feelings, supporting foreign currency financing of the financial institutions and companies from a particular country, maintaining the financial stability, macroeconomic stabilization, workforce employment, ensuring a proper transmission of the monetary policy).

Regarding the main objective of the monetary policy, the analyzed central banks aimed a 2% inflation target by actions meant to support sustainable economic growth, workforce employment and moderate long-term interest rates.

The monetary policy measures enacted by the analyzed central banks show the continuation of the monetary policy conduct from the previous years, i.e. the tendency of reducing the reference interest rate and use of unconventional, measures of monetary policy, unheard of in terms of nature, scope and size, with the purpose of defending the main objective of price stability. The context is that of the evolutions and forecasts regarding the global economic and financial

evolutions which presume risks for the economic perspective and volatility; of the conditions from the labour force market; of the analyses regarding the inflationist pressures and expectations. It is also taken into account the global perspective concerning inflation on the medium term, considering the general weakness of the real economy and the monetary dynamics, but also on the background of high uncertainty on the prospects of the US and the European Union economies, due to the possible consequences of the Great Britain's exit from the EU.

We consider, however, that it is difficult that the decrease of the monetary policy interest rate, given the low values it has reached, to bring about positive effects on lending by reducing its costs, because there is a bottom line below which the banks can no longer diminish the interest rates for deposits. Despite these, the Japan monetary policy with a negative interest rate, enacted in January 2016, together with the quantitative and qualitative easing, generated the substantial decrease of the short-term and long-term interest rates (which shows that these policies are efficient in influencing the entire yield curve) and improved the evolution of the economic activity and of the prices.

The main objections to the unconventional measures of monetary policy refer to practical problems related to their implementation, to their correlation with the traditional measures and to their coordination with other macroeconomic policies.

Bibliography

Bernanke, B. S., Reinhart, V.R., Sack, B.P. (2004), Monetary Policy Alternatives at the Zero Bound: An Empirical Assessment, Brookings Papers on Economic Activity, vol. 2004 (2)

Bernanke, B.S. (2009), The Crisis and the Policy Response, The Stamp Lecture, London School of Economics, London;

Harding, R. (2016), Bank of Japan vows to keep easing monetary policy, September 5, 2016, available at https://www.ft.com/content/8aedd988-7315-11e6-b60a-de4532d5ea35

Lenza, M., Pill, H., Reichlin., L. (2010), Monetary Policy in Exceptional Times, ECB Working Paper, No. 1253

* * *, Bank of England (2015-2016), Inflation Report, collection for 2015/2016

* * *, Bank of Japan (2016), Enhancement of Monetary Easing, July 29, 2016, available at http://www.boj.or.jp/en/announcements/release_2016/k160729a.pdf

* * *, Bank of Japan (2016), Introduction of "Quantitative and Qualitative Monetary Easing with a Negative Interest Rate", January 29, 2016, available at http://www.boj.or.jp/en/announcements/release_2016/k160129a.pdf

* * *, Bank of Japan (2016), New Framework for Strengthening Monetary Easing: "Quantitative and Qualitative Monetary Easing with Yield Curve Control", 21 September 2016, available at http://www.boj.or.jp/en/announcements/release_2016/k160921a.pdf

* * *, Board of Governors of the Federal Reserve System (2016), Monetary Policy Report, Washington, D.C., June 21, 2016

* * * http://www.boj.or.jp/en/mopo/outline/qqe.htm/
* * * https://www.ecb.europa.eu/mopo/decisions/html/index.en.html
* * * https://www.ecb.europa.eu/mopo/ela/html/index.en.html
* * *, https://www.ecb.europa.eu/press/govcdec/mopo/2016/html/index.en.html
* * *, https://www.ecb.europa.eu/press/pr/date/2016/html/pr160310.en.html
* * *, https://www.ecb.europa.eu/press/pr/date/2016/html/pr160421.en.html
* * *, https://www.ecb.europa.eu/press/pr/date/2016/html/pr160602.en.html
* * *, https://www.ecb.europa.eu/press/pr/date/2016/html/pr160721.en.html
* * * , https://www.ecb.europa.eu/press/pr/date/2016/html/pr160908.en.html
* * *, https://www.ecb.europa.eu/press/pr/date/2016/html/pr161020.en.html

INTERNATIONAL ECONOMICS AND FINANCE

NEW TRENDS AFFECTING HUMAN RESOURCES IN THE FINANCIAL SECTOR

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Abstract

With the rise of globalization and mass communication, the world is becoming a smaller place. The financial sector must navigate the choppy waters of a complex global economy by understanding the major demographic, technological and societal shifts. It is obvious that the global trends also affect human resources role. The continuous evolving financial sector will face several challenges from both the future workforce and from the changing nature of work itself.

Technology transforms workforce composition and culture by eroding physical barriers in the workplace. An increasing number of jobs may be conducted virtually (save on the costs of premises) with direct impact on job creation. Employees may work from a place of their own, making their physical presence less important: the growing phenomenon of crowdsourcing - "the human cloud" – where employees possessing a wide range of skills and expertise, take advantage of technology to perform a variety of tasks.

Sweeping demographic changes across both the developed and developing world will place greater pressure on both the government and private sector to initiate and implement creative solutions to educate, integrate and retain a rapidly changing and diverse working population.

In this context, training in banking services and finance as well as in financing rural activities is a very important tool. Banks are there to make money, but not in a risky way, and they require a different profile for success. The financial sector is looking for different leadership qualities. It's about how the business interacts with customers rather than innovation with products.

Keywords: human resources, financial sector, banking, training.

JEL classification: I22, O39

The globalization of business, the changing demographics and the changing patterns of mobility are global trends who affect the financial sector. Engaging and integrating a global workforce means the cultural integration and clashes/unrest will continue to grow globally, at both societal and corporate levels. Talent shortages will continue to grow globally. A lot of studies are carried out in the field of HRM (Human Resources Management) over the last years. All of them are extremely important because the results and conclusion (figure 1).

Changes in the nature of worker profile in the financial sector:

- Demographic shifts will continue and intensify structural changes in the global population with profound implications for the composition of labor force.
- Ageing populations across the globe poses a challenge;
- Countries with high rate of youth unemployment have greatest difficulty in findings managers and employees with the right attributes.
- "lost generation": people of 15-to-29 years old who are neither in education nor employment;
- Changes in the education system to prepare an overwhelming population.

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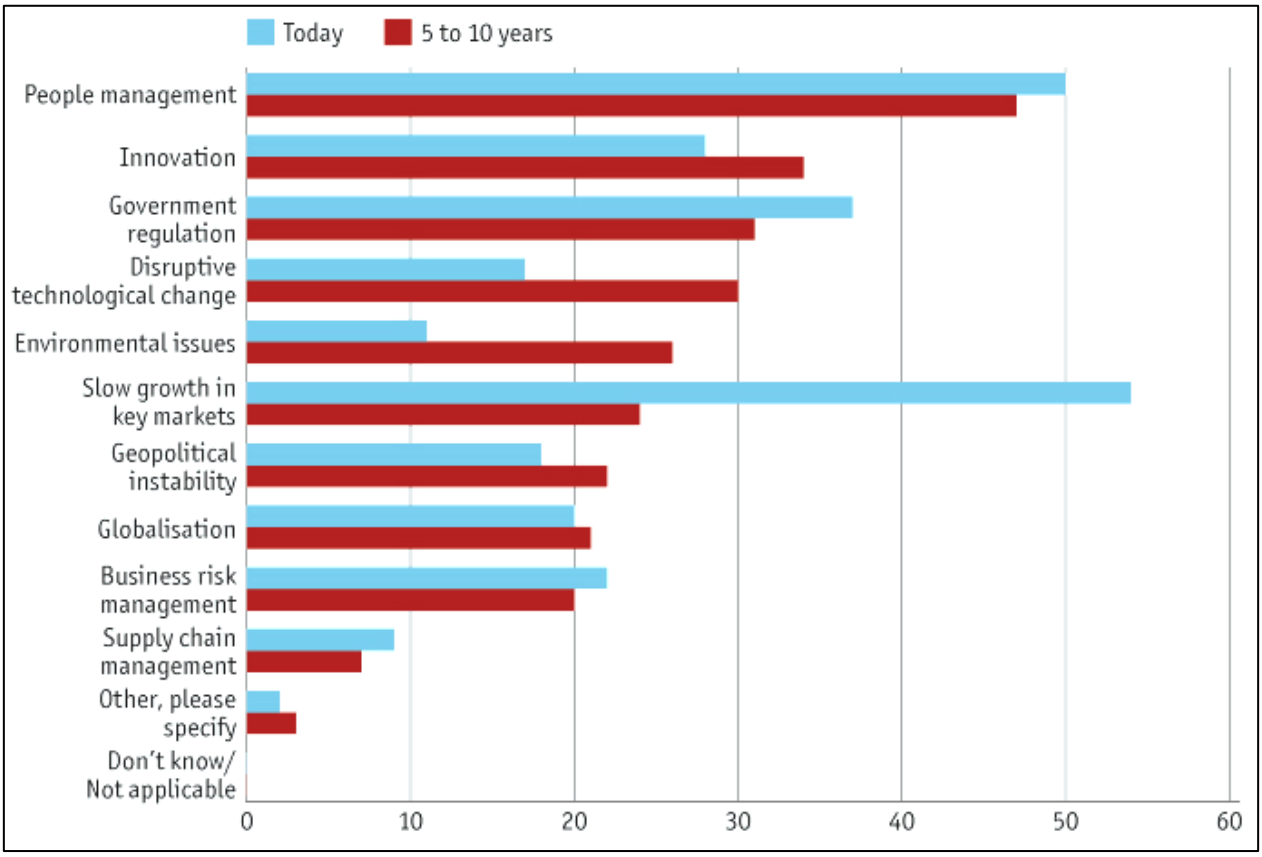
Figure 1 - Top challenges facing the Financial Sector



Sources: EIU/SHRM Foundation survey,
Managing Human Resources in a Changing World, jul 2013

From September to December 2009, PricewaterhouseCoopers conducted its 13th Annual Global CEO Survey. The survey looked at the measures CEOs took in response to the global financial crisis, how they view the future business environment and what changes they are making to adapt their organizations. In total, 1,198 business leaders in over 50 countries were surveyed.[77] "Companies worldwide are emerging from deeper cost-cutting than expected. In the 12th Annual Global CEO Survey, conducted as the financial crisis unfolded late in 2008, 26% of CEOs told they expected headcount reductions over the following 12 months. A year later, closer to half of respondents said they actually cut jobs and at least 80% of CEOs in each region of the world initiated cost reductions. In the latest survey, CEOs also told they would change a number of people management practices and processes as a result of the economic crisis. A majority of companies (79%) are intending to increase their focus and investment on how to manage people through change, which includes redefining employees' roles in the organization. The same number (79%) want to change their strategy for managing talent. And 68% will increase their investment in leadership and talent development as a result of the crisis. The scale of these anticipated changes suggests that, for whatever reason, existing people management practices did not support the business when the crisis hit.

The CEO survey highlights three major human capital failures which were brought to the surface as a result of the downturn:

- Existing reward models are broken. Whether as a result of regulatory or public pressure, reward models are seen as not fit for purpose in many parts of the world. This is not just confined to financial services; the criticism of reward models can be seeing across almost every sector. In addition, the heavy burden of pension and healthcare liabilities are crippling many otherwise successful organizations in the US and Europe.

[77] *Managing people in a changing world Key trends in human capital a global perspective – 2010, Human Resource Services, PwC Saratoga*

- CEOs were unable to move talent around quickly when the crisis hit. This led to large-scale layoffs to save cash at one extreme, but also left crucial talent gaps at the other. Organizations will have to find more agile ways of deploying and reallocating talent to where it is most needed. Doing this while keeping employees engaged is key, with 75% of CEOs planning to invest in improving employee morale and engagement. As organizations move through recovery, those that underwent drastic headcount reduction now face the costly exercise of rehiring and reskilling as demand improves.
- Many organizations lack the key skills needed to operate and compete in the new emerging environment. For example – greater risk awareness, market adaptability, change management capability, responding to new customer demands. CEOs in many parts of the world also believe that governments have largely failed to supply a workforce with the right skills (57%). This is likely to support why 76% of CEOs plan to increase their investment in training and development".

Respondents to a study commissioned by KPMG International, give similarly mixed messages. About eight in ten (81 percent) respondents say that putting in place the most effective talent management strategy will be key to competitive success. Some six in ten (59 percent) believe that HR will grow in strategic importance. But just 17 percent maintain that HR does a good job of demonstrating its value to the business. Meanwhile, the forces of globalization, talent constraints and new technology are driving rapid change to the HR function. Fifty-five percent of survey respondents believe the metrics that define success in HR today will fundamentally change over the next three years.[78] The study "Rethinking Human Resources in a Changing World" examines the nature of the challenges facing the HR function and its future direction. The report's main findings include the following:

- *Global workforce* **-** HR is struggling with the challenges of managing a global, flexible workforce. The global workforce has become increasingly integrated across borders while simultaneously growing more virtual and flexible;
- *Employee engagement* - Finding ways to engage with workers will help address the challenges of this global, flexible and remote workforce. Insights from interviewees for this report point toward improved employee engagement as the way to address many of these problems (Manta O., 2017);
- *Streamlining through ICT* - Technology has already transformed HR and the application of data analytics will foster even more profound change. Sixty-nine percent of companies surveyed say it is more common for the HR function to provide web-based and/or mobile HR platforms (e.g. benefits, payroll) than it was three years ago; only three percent of respondents have cut back on these technology enhancements;
- *Data analytics* - The advent of data analytics – the most commonly cited area by respondents for IT investment in the next three years – will lead to the next technological quantum leap for HR;
- *Technology and economy* - These are the twin catalysts for HR transformation. Powerful technologies, emerging in times of heightened financial constraints, present a rare opportunity for HR to enact longoverdue reinvention.

As a conclusion, HR needs to:

- develop greater confidence, leadership and credibility, so that HR heads can deservedly insist on a place in strategic conversations at the highest levels;
- develop closer partnerships within the company, especially with line managers who will inevitably use technology driven HR services to play a greater role in employee management;
- recast its strategy so that it begins from a whole-business perspective and is aligned with the needs of the entire company, not just the HR function.

We can see the changes in the nature of worker profile in the Financial Sector:

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[78] *"Rethinking human resources in a changing world" - amcham connection, july/august 2013, prepared by KPMG*

- demographic shifts will continue and intensify: structural changes in the global population with profound implications for the composition of labor force and ageing populations across the globe poses a challenge;
- countries with high rate of youth unemployment have greatest difficulty in findings managers and employees with the right attributes - "lost generation": people of 15-to-29 years old who are neither in education nor employment;
- changes in the education system to prepare an overwhelming population - technology transforms workforce composition and culture - eroding physical barriers in the workplace/ an increasing number of jobs may be conducted virtually (save on the costs of premises), direct impact on job creation, employees may work from a place of their own, making their physical presence less important, "the human cloud" – crowdsourcing employees possessing a wide range of skills and expertise, taking advantage of technology to perform a variety of tasks;
- globally, in countries previously dominated by either the agriculture or manufacturing sectors (e.g. China), the services sector grew more quickly against the agricultural sector;
- the global multinational as the new normal: expand operations at global level;
- temporary employment – the new normal;
- increase in the number of women entering the workforce;
- global migration and the great war for talent - limited cultural homogeneity within national workforce, due to substantial movement of populations domestically and cross-border (for example increased foreign population inflow into Germany);
- increased demand for tasks where employees have a comparable advantage;
- need for high – skilled university graduates;
- changes in the culture of the workplace.

Financial Sector Companies will need to build partnerships with educational institutions and governments with the aim of ensuring an adequate pipeline of the skills required (technical, vocational skills or adults continuous education).

Bibliography

Berger, Allen N., Anil K Kashyap, and Joseph M. Scalise, 1995, "The Transformation of the U.S. Banking Industry: What a Long, Strange Trip It's Been." Brookings Papers on Economic Activity, no. 2.

Craig, Ben, 1997, "Where Have All the Tellers Gone?" Federal Reserve Bank of Cleveland Economic Commentary, April 15.

Larsen, Richard J., and Morris L. Marx, 1986, An Introduction to Mathematical Statistics and Its Applications. Englewood Cliffs, N.J.: Prentice-Hall. Morisi, Teresa L. 1996. "Commercial Banking Transformed by Computer Technology." Monthly Labor Review, August.

Radecki, Lawrence J., John Wenninger, and Daniel K. Orlow, 1996, "Bank Branches in Supermarkets." Federal Reserve Bank of New York Current Issues in Economics and Finance 2, no. 13.

Rhoades, Stephen A., 1996, "Bank Mergers and Industrywide Structure, 1980-1994." Board of Governors of the Federal Reserve System Staff Studies, February

* * *, American Banker, 1997, "Bear Stearns Said to Be Developing a Loan Syndications Fund." February 5, p. 22.

ECONOMIC CONVERGENCE IN THE EU AND BULGARIA

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Abstract

The present research is devoted to "economic convergence" in the sense of "economic catch-up" and the convergence of the macroeconomic indicators and the living standards of the new EU Member States from Central and Eastern Europe with those of the developed economies of the EU. It is clarified that the economic and social development and territorial integrity of the EU are dependent on the successful convergence of the Member States and not only on that of the separate levels. The European Structural Funds (ESF) are introduced in order to overcome the economic and social disparities in the EU, as they are the main mechanisms for overcoming these significant differences. With the entry into force of the Maastricht Treaty, compliance with the nominal economic indicators becomes a prerequisite for entry into the euro area. The establishment of the Economic and Monetary Union (EMU) is the most significant element of economic integration into the EU. The question arises: to what extent does the EMU contribute to the economic convergence of the Member States? According to the Accession Treaty to the EU, Bulgaria must join the EMU. The main question raised in this research is how does the economic convergence of Bulgaria with the new EU Member States and the developed economies of the EU take place.

Keywords: economic convergence, neoliberal model of the Economic and Monetary Union (EMU), differences in gross domestic product (GDP) per capita in the EU.

JEL Classification: Q47

Does the Economic and Monetary Union (EMU) Contribute to the Convergence of the Economies in the Euro Area?

"Economic convergence" is a complex concept that reflects various aspects of the economic and political life in the EU. The convergence and cohesion policy of the EU countries and regions is based on Article 3 of the EU Treaty, which states that the EU "shall work for the sustainable economic and social development of Europe, based on balanced economic growth and price stability" and therefore "it shall promote economic, social and territorial cohesion, and solidarity among Member States". The cohesion or convergence is directed towards the overall sustainable and harmonious development of the EU and a strong emphasis is placed on the reduction of the economic and social disparities between the different EU regions.

After the entry into force of the European Single Market and at an earlier stage of economic integration, "economic convergence" means the approximate convergence of the GDP per capita of the EU regions and the EU Member States, which in turn means a convergence of income levels. The sustainable development and the economic cohesion of the regions and countries are expressed in real terms through the introduction and operation of the European structural and regional funds (ESRF). They contribute to the coordination of the economic policy of the EU. The ESRF are among the main tools for tackling major economic, financial and social differences between the Member States. Funding through the ESRF is important for every EU Member State because they are aimed at funding infrastructure projects, retraining the workforce, introducing innovative practices in manufacturing and agriculture, developing schemes for saving natural resources and energy, etc. The ESRF aid the development of priority economic sectors in every Member State, but the most substantial financial and technical support is provided to the "less developed regions" - in those countries where the GDP is below 75% of the EU average.

The entry into force of the Economic and Monetary Union (EMU) is a new higher stage of economic, monetary and financial integration. Unlike the integration of the trade in goods and services through the entry into force of the Single Market, the EMU puts limitations on the ability to make sovereign economic decisions. The monetary policy is determined by the European Central Bank (ECB) and the countries cannot use the instruments of monetary policy in order to regulate

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certain economic and social goals on a national level. The term "economic convergence" acquires another meaning upon entering into a new, higher stage of economic, monetary and financial integration, wherein, apart from the GDP per capita, five additional macroeconomic indicators (the Maastricht criteria), such as the budget deficit and the public debt in relation to GDP, the inflation rate and the movement of the mid-term interest rate, become important for economic coherence and convergence. By entering the euro area, the EU Member States take on the obligation to respect certain limits to the allowed level of deviation from the abovementioned macroeconomic variables, with the exception of countries that have not adopted the common European currency, such as Denmark, Sweden and the UK. (In 2016, Britain intends to withdraw its membership from the EU following a referendum on the topic of staying or leaving the EU.)

If we examine the Lisbon Strategy and the Europe 2020, the concept of "economic convergence" is once again enriched with the inclusion of socially significant socioeconomic indicators such as the level and quality of education, employment, scientific and technical development, the reduction of poverty in Europe and other indicators that characterize the standard and quality of life. The socioeconomic indicators and targets of economic development are determined by the executive branch of government in every Member State. The Member States sign into a socioeconomic level program, which is discussed and coordinated by the European Commission (EC) and other responsible/relevant institutions in the EU. Achieving the socioeconomic goals of the country is part of the coordinated efforts by the EU to achieve the convergence of the economic development of the Member States, which is a prerequisite for entering into a new, higher stage of integration in all areas of economic life.

The global financial and economic crisis and the sovereign debt crisis in the euro area countries in 2010 are changing the macroeconomic and social framework of the EU. The sovereign debt crisis in Europe brought to light the significant structural economic and financial problems of the euro area. European banks are experiencing serious liquidity problems which can be overcome mainly with the help of public funding and funding from the ECB. The limiting of the credits granted by banks to the real sector of the economy is forcing many European companies to reduce their import-export operations and investments. This affects the economy and trade of almost all the new Member States that entered the EU in 2004 and 2007.

The deterioration in the ratio of domestic debt to GDP in Spain, Portugal and Greece substantially disrupts the social, economic and financial stability in the euro area. These adverse events require the application of specific measures aimed at introducing a series of prudential and effective measures of supervision over the banking and financial sector in the euro area countries and the EU. The measures taken in order to curb the high domestic debt of the countries form the basis of the "European fiscal pact" program, the "European semester", etc. In order to curb the accumulation of new debt, the indebted countries are forced to pursue a restrictive budgetary policy, to impose restrictions over domestic expenditure and to stimulate the attraction of funds in the revenue part of the budget. These policies are aimed at reducing the number of economic and social programs of the governments. The economic business cycle varies from country to country and this also suggests that, in the short term, the recovery of the economies in the period after the economic and debt crisis in Europe cannot happen simultaneously in all EU Member States.

The economic and financial problems accumulated by the EU countries, as well as the difficulties that they overcome, indicate that the Maastricht criteria, as benchmarks for a sustainable and convergent economic policy, are not followed. The accumulation of economic imbalances in some EU countries shows that the differences between the macroeconomic indicators in the different EU Member States are deepening and the objectives of economic and social cohesion are postponed in time.

The main imbalance of the EMU is rooted in the lack of a unified fiscal and budgetary policy in the EU. For example, if the economic growth in a Member State is relatively higher, this suggests that the inflation is likely to grow. Due to the lack of sovereignty in the monetary policy, the Member State has no right to unilaterally raise the medium-term interest rate. Conversely, if the economic growth in a Member State deteriorates, it cannot unilaterally devalue (or depreciate) its currency in order to improve the competitiveness of production. The single monetary policy does not allow unilateral countermeasures on the part of the state - neither when there is higher inflation, nor when there is a fall in economic growth - which is the reason behind the occurrence of asymmetry in the economic business cycles of the countries in the euro area. Because they are at different

levels of economic activity – recovery or stagnation - the Member States do not have the freedom to guide economic policy towards a restrictive or expansionary monetary policy. According to the theory of monetary integration, the asymmetric shocks and the differences in the economic business cycle can be adjusted and controlled by fiscal policy. The countries that are experiencing a crisis have the opportunity to stimulate their economies by cutting taxes and increasing public spending, while the countries that are expecting an economic downturn and problems in the banking and financial sector should increase taxes and shrink public spending. The difficulties of overcoming the asymmetries in economic development, as well as the differences in the structure of the different EU economies, are one of the prerequisite for the slow overcoming of the crisis trends in the economies of the EU countries. There are still some considerable discrepancies, as some of the countries in the euro area are experiencing considerable difficulties in servicing the high domestic debt, while others show signs of economic recovery, because the economic growth rates are low but positive. Euro area interest rates are low and there is a risk - if the government debt of some countries is growing, this will affect the balance on the European financial markets. The growth of the risk margin that is charged on the debt securities of countries with high domestic debt means that the principal amount and the interest rates on it are also rising – this is a process that can spiral out of control and affect the stability of the euro area.

The economic crisis and the sovereign debt crisis in Europe bring into question the sustainability and appropriateness of Member States having to complying with the strictly fixed Maastricht criteria. They are undoubtedly a guarantee of compliance with the monetary and financial discipline, but, at the same time, the deviation from the fixed parameters of the macroeconomic indicators of the euro area countries shows the need for some reforms. Therefore, the fixed Maastricht criteria are at the core of the discussions concerning the impact of the level of the nominal economic variables on the actual economic situation of the Member States. The only mechanism that could act as a counterbalance to the economy is called "internal devaluation". "Internal devaluation" means cutting labor costs, a rise in unemployment and lower public and social costs. It is a substitute for the devaluation of the national currency, but this substitute is dangerous for the social sector of the economy because it gives rise to the deterioration of living standards and it impedes the process of economic, social and territorial cohesion. Internal devaluation or the waste of human capital contributes significantly to the strengthening of the separation processes in the euro area and for the deepening of the differences in both the financial welfare and the real sector.

A major question, which is also important for the deepening of the monetary financial integration, is how to overcome the difference in the economic business cycle and how the countries can counteract the occurrence of unanticipated external economic and other shocks, given that euro area countries have a common monetary and currency policy, but at the same time they lack shared fiscal and budgetary responsibility. Addressing these issues is left to the prerogatives of the supranational political and economic authorities in the EU, which introduce measures for strengthening the supranational forms of regulation.

The question that stands is: what are the ways of effective economic coordination and convergence in an economic community which is moving at different speeds and has a different economic structure. In the post-crisis period, the differences in the economic development of the EU countries continue to deepen, but the European Commission (EC) tries to give a new meaning to the term "economic convergence" by extending the scope of the observed indicators. The macroeconomic imbalances are placed under heightened supervision, as eleven indicators are being monitored, including the current account of the balance of payments, the competitiveness of the economy, the corporate debt, the debt and over-indebtedness of households, etc.

The economic convergence of the EU economies is a complicated and complex concept and it reflects the evolution of the EU integration process. It boils down to several areas, namely: a) real convergence of incomes, relative equalization of living standards, increasing employment, improving energy efficiency and other factors; b) convergence of policies, such as fiscal policy, monetary policy, social policy and central bank independence.

Economic convergence between Bulgaria and other EU member states

Nominal Economic Variables and the Convergence of Bulgaria

The economic convergence in relation to Bulgaria's accession, firstly to the Exchange Rate Mechanism II (ERMII), and secondly to the euro area, represents the evolution of the main macroeconomic indicators which act as convergence criteria in accordance with the Treaty on the Functioning of the European Union (Maastricht). These criteria measure the nominal economic convergence that constitutes the first part of the assessment of the economic convergence of Bulgaria.

The Bulgarian economy has undergone impressive changes during the economic transition from a central to a market economy. The years of transition to a market economy are characterized by extreme economic and political instability. The monetary and fiscal policies applied are aimed at developing the private sector of the economy, which is experiencing a series of economic shocks due to the unsustainable and chaotic development of the Bulgarian economy in the early years of the transition. The transformation of social and economic relations strongly influences the political and economic system in the country.

The applied economic and monetary policies, coupled with the weak financial and banking sector lie at the heart of a series of economic and financial shocks that affect economic growth. The culmination of this inconsistent monetary and fiscal policy is the outbreak of the banking crisis in the years 1995-1996. Subsequently, the adoption of the Currency Board in 1997 stabilized the economic system and the payment system in the country.

Bulgaria's integration into the EU structures (on 1.01.2007) is a positive stimulus for economic development. The economic growth is improving thanks to increased private consumption, investment in the economy, the reduction of unemployment and the increase in exports. The stabilization of the Bulgarian economy is also due to the favorable international economic environment in Europe.

Under the Currency Board regime, Bulgaria maintains a strict financial discipline. There is a budget surplus of 3% of the GDP. The financial discipline allows for tax cuts and this policy is geared towards attracting investments by local and foreign investors into the economy. It helps to mitigate the burden of taxes on the population. Under the Currency Board regime, the lack of monetary policy is compensated by the accumulation of foreign exchange reserves in the Bulgarian National Bank (BNB). The currency reserves act as a buffer in case of a liquidity shortage or other external shocks.

The bank credits to businesses contribute to the modernization of the industrial sector, the increase of production and the creation of jobs. The bank credits to households make the expansion of domestic consumption possible, while at the same time there is an increase in domestic demand. These processes increase the level of inflation and the value of the Bulgarian lev is really rising in relation to that of the euro. In the years 2005-2008, the foreign trade volume increased, with imports exceeding exports. As a result, the current account deficit of the balance of payments is growing. The external current account deficit of the balance of payments increased to a double-digit number, as opposed to the GDP before the crisis. The current account deficit is financed by the inflow of FDI. After 2002, the volume of the accumulated FDI and the domestic consumption contribute to the GDP growth. The influx of foreign capital contributes to the overheating of the economy and the sustainable increase in fixed asset prices. Overall, the real economic growth amounts to 5% annually in the years 2003-2008. GDP growth, increased consumption, investment activity and lower taxes affect the occurrence of a current account deficit of the balance of payments and lie at the core of the relative decline in the competitiveness of Bulgarian exports (*Macroeconomic Imbalances, Bulgaria, 2014*). The Bulgarian governmental authorities pursue policies aimed at reducing budget deficits and government debt.

In the pre-crisis period, Bulgaria experienced a period of a very rapid accumulation of imbalances, which was also related to the economic reforms carried out in relation to the process of Bulgaria's integration in the EU.

The main concerns for the macroeconomic stability stem from the growing current account deficit of the balance of payments and the increase in domestic credit, and this trend exacerbates the

domestic economic imbalances. Similarly, before the crisis the economies of the Baltic EU Member States are experiencing a more rapid growth, but this growth is unsustainable, which leads to an increase in production in comparison to the Western European countries. The differences in economic growth between the new EU Member States and the euro area countries deepen the macroeconomic imbalances.

It could be argued that, as a lagging economy, Bulgaria is achieving higher growth rates in comparison to the euro area countries, which theoretically allows for the assertion that the country is in a position of catching-up, it is achieving higher growth rates and it is in the process of economic convergence.

The economic crisis of 2008-2009 gives rise to a sharp decline in the developed European economies. It is felt in Bulgaria much later - when the orders from the major trading partners of Bulgaria shrink and the volume of FDI falls abruptly. Businesses cut costs and shrink domestic production, which leads to an increase in unemployment and a decrease in domestic consumption and investments. The banks tighten the conditions for granting credits to businesses and households, and the interest rates on credits greatly increase, which leads to an increase in the indebtedness of businesses and households. The decline in bank credit and the reduction of investments also contribute to the sharp decline in the industry.

The economic situation changes during the post-crisis period. Economic growth fluctuates around 1%. Many sectors of the economy are slow to recover from the economic downturn due to the low level of local and foreign investment, the weak domestic and foreign demand for Bulgarian goods and the weak domestic consumption.

Although in the post-crisis period employment in all major sectors of the economy is improving, unemployment among young people with a lower level of education and qualification remains relatively high, as job positions disappear during the crisis. In 2014, the workers aged between 15 and 64 years of age amount to 2.9 million people - their number has increased by 1.3% compared to 2013. Employment is growing in the major sectors of the economy with the exception of trade and transport. The decline in unemployment in 2014 is lower than the average unemployment rate in the EU, which amounts to 10.7% in 2014.

The contraction in domestic demand led to a decline in inflation. The average annual inflation rate decreased from 1.0% in May 2013 to - 2.1% in February 2014, reaching -1.3% in April 2014 (*Convergence Report June 2014*). The deflation registered in Bulgaria reflects the ongoing stagnation in production, the reduced consumption, the weak bank credit and the negative impact of the prices of basic raw materials and energy (*table 1*).

Weak domestic demand remains the determining factor for the level of economic growth. In 2014, the private consumption is stabilized, mainly due to the reduction in interest rates by commercial banks and the decline in oil prices (2015). An alarming factor indicating stagnation in industrial production is the fact that gross capital formation has remained at the same level since 2012 (*table 1*). The surplus in the current account deficit of the balance of payments that amounted to 0.1% of the GDP in 2011 became a deficit of 1.1% of the GDP in 2012. This is the result of weaker exports in 2012 and the need to import the goods necessary for the construction of large infrastructure projects. The trade deficit is also melting and in recent years it has been hovering around 5% due to the decrease in domestic consumption and industrial production. Exports from Bulgaria in the period between January 2014 and January 2016 on average amount to 3.7 billion euro. Export growth gives rise to the expectation that it plays the role of an engine that will liven up the Bulgarian economy. In the post-crisis period, those economic sectors of the Bulgarian economy that are export-oriented overcome the effects of the crisis more quickly. This is due to the fact that Bulgarian exports occupy specific niches in the international market of goods and services, which allowed exports to rise in 2013, after which they once again declined.

Table 1

Main macroeconomic indicators for Bulgaria

Indicators	2008	2009	2010	2011	2012	2013	2014	2015
Real GDP (y-o-y) (%)	5.8	-5.5	0.7	1,6	0,2	1.3	1.6	3,0
Gross capital formation (y-o-y)	22.0	-17.4	-18.3	-4.6	2.0	-0.1	2.3	-2.3
Budget deficit (-) / surplus (+) % of GDP				-2,0	-0,3	-0,4	-5,4	-2,1
Government debt (Maastricht debt) % of GDP				15,3	16,8	17,1	27,0	26,7
Export of goods and services (y-o-y)%	2.5	-11.7	17.2	34,4	3,2	7,8	-0,9	4,2
Import of goods and services (y-o-y)%	4.9	-21.5	4.1	22,4	8,8	2,0	-1,4	3,1
Inflation (HICP) average (y-o-y) (%)	12.0	2.5	2.9	3.4	2.4	0.4	-1.6	- 1,1
Unemployment rate (%)	5.6	6.8	10.3	10,4	11,4	11,8	10,7	10
Current account of the balance of payments (% of GDP)	-23.1	-8.9	-1.48	0.3	-0,9	1,3	0,1	0,4
Trade balance (% of GDP)	-20.6	- 8.2	-2.48	-6,6	-9,6	-7,0	-6.5	-5,9
Long-term interest rate **				5,36	4,50	3,47	3,35	2,49

** Annual percentage change (y-o-y) - change compared with the previous year (or period)*
*** Long-term interest rate for assessing the degree of convergence*
Source: NSI, BNB

The post-crisis development of the Bulgarian economy shows that Bulgaria covers and even surpasses some Eastern European countries in terms of the implementation of the Maastricht criteria, which are a prerequisite for a full membership in the Economic and Monetary Union (EMU). Under the criterion of "Harmonized Index of Consumer Prices" (HICP) (the annual average rate of inflation for 12 months), in the post-crisis period Bulgaria is experiencing deflation at times, due to the superposition of several unfavorable factors in the economy, but generally speaking Bulgaria is far below the reference inflation rate after 2013. Under the criterion of "Budget Deficit", in 2014Bulgaria exceeds the reference framework, but by 2015 the deficit has stabilized. Government debt in relation to GDP under the Maastricht criteria is also below the reference framework of 60% of GDP. The long-term interest rates under the Maastricht criteria have also declined in recent years. The exchange rates stability was secured following the adoption of the Currency Board, but the Bulgarian lev which is firmly pegged to the euro probably has a negative impact on the competitiveness of Bulgaria's foreign trade.

The high degree of openness of the Bulgarian economy is the reason why exports play a role in increasing economic growth. The different exchange rate regimes applied by the countries of Central and Eastern Europe have a different impact on the foreign trade in these countries. When there is a decrease in exports, the fixed exchange rate of the lev in relation to the euro does not allow the depreciation of the nominal exchange rate of the Bulgarian lev (BGN) in relation to the euro. The Central European countries and Romania have flexible exchange rate regimes and this allows for maneuvering with the level of the nominal exchange rate when there is a decline in exports and when there is an increase in imports, which limits the contraction of production in the event of crisis tendencies or stagnation. The flexible exchange rate regimes may very well contribute to the more rapid recovery of production in the countries where they are implemented. (*ECB, July 2010*).

Table 2

Nominal convergence criteria of Bulgaria and of the countries in Central and Eastern Europe whitch are not to members of the euro area as of april 2016

Countries	Reference values/benchmarks					
	HICP max. 0.7% as of 04/2016	Budget (-) % of GDP	Domestic debt % of GDP	ERM II	Long-term interest rate max. 4%	Compatibility of the legal framework
Bulgaria	-1%	2,1%	26,7%	No	2,5%	No
Croatia	-0,4%	3,2%	86,7 %	No	0,3%	Yes
Czech Republic	0,4%	0,4%	41,1%	No	0,6%	No
Hungary	0,4%	2,0%	75,3%	No	3,4%	No
Poland	-0,5%	2,6%	51,3%	No	2,9%	No
Romania	-1,3%	0,7%	38,4%	No	3,6%	No

Source: Convergence report, June 2016, European Commission, European Economy, Institutional Paper 026

According to the Convergence Report (June 2016), other factors are also included in nominal terms, such as: the evolution of the balance of payments, the development and integration of markets, the trade balance and the capital account from 2013 to 2015.

Bulgaria follows the convergence criteria relatively well in the period 2014 – 2016, as the inflation rate in the country decreases to deflation, but these levels correspond to the inflationary levels in the euro area. The budget deficit is also decreasing. Bulgaria does not participate in the Exchange rate mechanism II, although the exchange rate of the lev is irreversible pegged to the euro. After 2014, the economic environment is improving and the observed trend in economic activity begins to gain momentum once again in most of the EU Member States - a process that has a positive effect on the Bulgarian economy. This reflects the impact of the rising real disposable income, supported by the absence of inflation and the economic stabilization in the euro area countries, provided that Bulgaria does not have a monetary policy. The nascent recovery led to some improvement in labor market conditions, but unemployment rates in Bulgaria remain high. It should be noted that in the IT sector, as well as in the business services sector, activity is expanding due to the influx of foreign companies in this segment of the market, but there are not enough highly qualified specialists. In this respect, there has been some progress in terms of the compensation of external imbalances, as well as a decrease in the hazards and the vulnerability of the Bulgarian banking sector, which was negatively affected by the bankruptcy of the Corporate Commercial Bank (CCB).

As of 2016, Bulgaria is following the criterion of “price stability”, as the 12-month average inflation rate was below or in several instances even below the reference value of 0.7%. Bulgaria, as previously mentioned, reports a negative inflation rate. Regarding the criterion of the government budgetary position, in 2015 the general government balance in all countries that are not members of the euro area (with the exception of Croatia) is level with, or below the deficit reference value of 3% of the GDP. In 2015, the debt in relation to the GDP was below 30%, and the debt itself was well below the values registered in other countries which are not part of the euro area. With regard to the convergence of long-term interest rates, similar to 2014, in these countries the long-term interest rates were below the reference value of 4%. In Bulgaria, the long-term interest rate stood at 3.5% throughout the May 2013 - April 2014 period and at 2.5% throughout the May 2015 - April 2016 period (*ECB Report on convergence, June 2016, p. 50*)

It is stressed that the Bulgarian economy and finances are integrated with the euro area through trade, investment and through foreign subsidiary banks, which operate on the Bulgarian banking market. There is still uncertainty in the financial sector, intercompany indebtedness remains high and the labor market is subject to limited regulation.

The Real Economic Convergence of Bulgaria

The question remains whether the compliance with the Maastricht criteria (the nominal macroeconomic variables) is a sufficient condition for the convergence of the Bulgarian economy with those of the countries that are farther ahead in their EU integration process than Bulgaria? The answer to this question reveals the degree of the real economic convergence of Bulgaria in the EU.

Real economic convergence is aimed at forming similar economic structures in Europe. In the economic literature devoted to economic growth, real economic convergence is known generally as ß-convergence and δ-convergence. The first type (ß-convergence) is the catching-up of the relatively less developed economies to the developed economies. This means that countries where incomes are lower should achieve higher economic growth and the income levels should become close to those of the wealthier EU countries. A known measure of ß-convergence is the relative GDP per capita, calculated based on the purchasing power standards (PPS).

The second concept (δ-convergence) is expressed by reducing the dispersion in the level of income in the different EU countries. This means that a less developed economy should achieve higher sustainable economic growth compared to that of the developed economies, so that the incomes in the countries in the regional bloc converge after a certain period of time. The Member State have to raise the GDP per capita, in accordance with the ß-convergence, while the δ-convergence expresses the effects of the rise in the relative GDP per capita of the less developed economy. Sustainable real convergence is a process in which the GDP per capita of a country with a lower income rate really catches up and becomes closer to that of the more developed economies. Real economic convergence is a precondition and a requirement for economic integration because income convergence means sustainable economic growth and the ability of the less developed economy to counteract external shocks. (*ECB Economic Bulletin, Issue 5/2015 - Article p.30*)

The EMU changed the process of income convergence in the euro area. The GDP growth per capita is unsustainable due to the fact that the asymmetric external shocks cannot be countered with the tools of domestic monetary policy. The reduction of the differences in the interest rates margin of the ECB does not allow for maneuvering with interest rates at the national level, and this also hinders the process of catching-up and convergence of the EU economies.

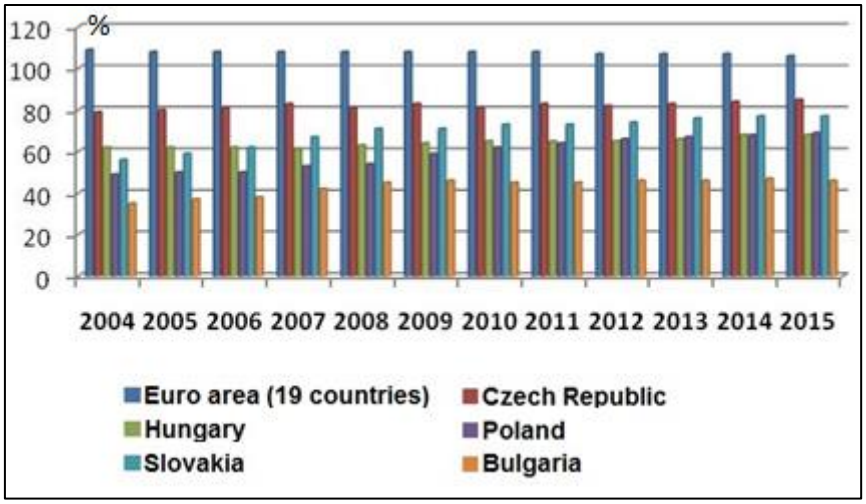
In the 1999-2014 period, according to the ECB, 2 there was no improvement in the real convergence among the 12 countries that adopted the euro before 200, but at the same time signs of cohesion and real convergence can be seen between the euro area countries and the countries that adopted the euro after 2002. (*Real convergence in the euro area. p.31-32*) This is probably due to the fact that economically developed countries have similar economic structures and convergence there has been more effective after the entry into force of Single Market. Estonia, Latvia, Lithuania, Romania and Slovakia are successful in the process of catching-up and seek to substantially converge with the average level of real economic convergence in the EU. In the medium term, the real convergence of the EU countries continues to be a determining factor in the economic strategy and policy undertaken by the new EU Member States, including Bulgaria.

Bulgaria's economic growth is closely tied to the economic and social development of the EU. The economic growth in Bulgaria in the years before the economic crisis was positive and fluctuated around 5%, but the real GDP in Bulgaria increased by 2.3% throughout the 2006-2015 period and by only about 1.5% throughout the 2011-2015 period. It is higher than the average level for the euro area countries, but it does not contribute significantly to the reduction of the gap in the economic field. As previously highlighted, Bulgaria follows the Maastricht criteria; it intends to join the exchange rate mechanism II (ERMII) and to become a member of the euro area. In this regard, the fulfillment of the nominal criteria is necessary, but the matter of the real economic convergence of Bulgaria in the EU remains important as well.

The comparison between the GDP per capita based on the PPS of the EU Member States from Central Europe with that of Bulgaria shows that this indicator raised the most in Poland and Slovakia in the 2004-2015 period. During this period, the GDP per capita remained at virtually the same level in Hungary and the Czech Republic. This indicator rose by several percentage points in Bulgaria, which shows that the country is lagging behind in comparison with the countries of

Central Europe. The GDP per capita in Bulgaria amounts to 41.2% out of 100% in the euro area, while in the 2011-2015 period it was 42.7%. (*Fig. 1*)

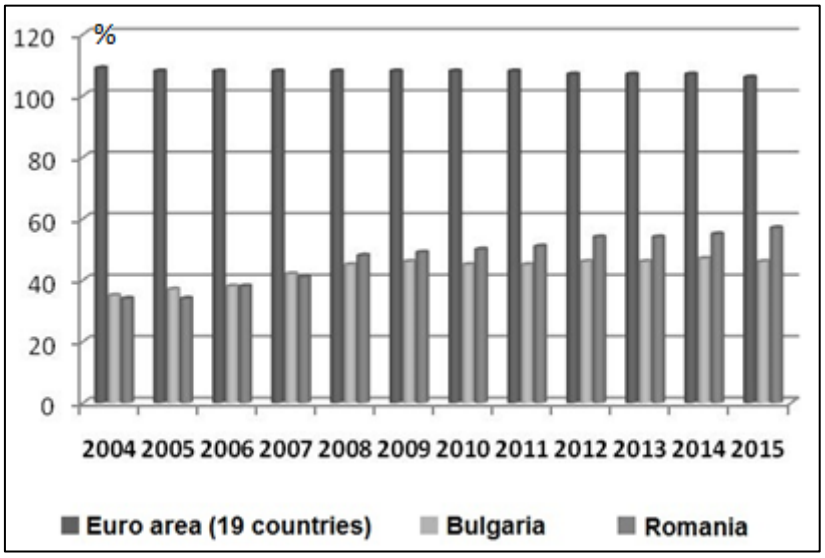
Figure 1 - GDP per capita based on purchasing power standards (PPS) EU28 = 100 annual data for the 2004-2015 period (%)



Source: Eurostat

Romania and Bulgaria have been members of the EU for 10 years now, but in terms of the indicator of GDP per capita based on PPS they are significantly lagging behind the average level of the euro area countries. Nevertheless, the GDP per capita is growing faster in Romania and Romania is coming close to the level of the Central European EU Member States. This shows that the income convergence process of Romania with the EU is relatively more successful in comparison to that of Bulgaria. (*Fig. 2*)

Figure 2 - GDP per capita based on PPS for the euro area countries (19 countries), Bulgaria and Romania for the 2004-2015 period (%)



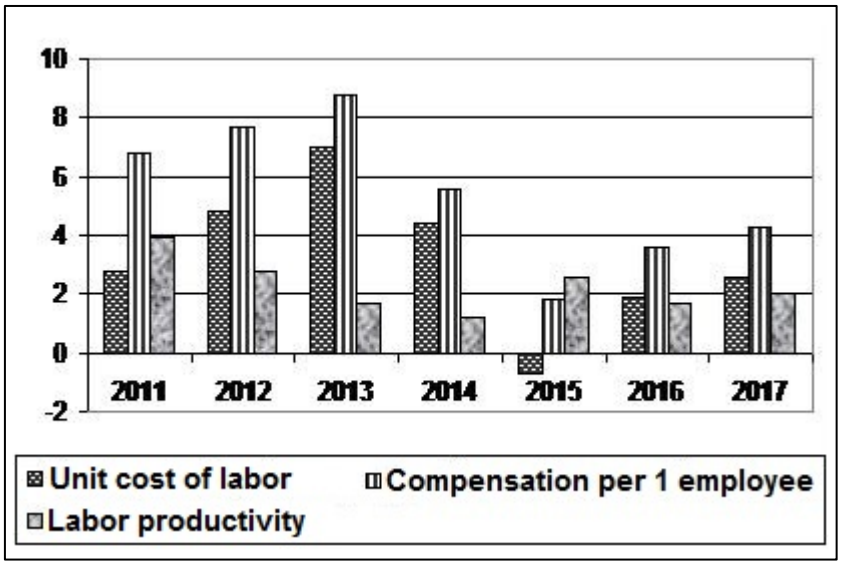
Source: Eurostat

The rising rates of economic growth are having a positive impact on the production and consumption of goods and services. They should grow faster in a weaker economy in comparison with the development rates of production in a developed economy. The aim is the convergence of the levels of production and consumption in the EU. The basis for this assertion lies in increasing the labor productivity and the added value created by a worker in 1 hour of work. The real change in labor productivity demonstrates the capability of the country for economic convergence.

After Bulgaria became an EU member, some improvement could be seen in the key indicators that are relevant to the improvement of labor productivity in the Bulgarian economy, such as the real

GDP, the GDP per capita, the relative price level, the wages per employee, etc. The data show that the unit cost of labor in Bulgaria amounted to 5.8% throughout the period 2006-2015 and that it fell to 3.6% in the 2011-2015 period (Data from the ECB). On the other hand, the labor productivity in the period 2006-2015 totaled 2.4%, while in the period 2011-2015 it declined. (*Figure 3*).

**Figure 3 - Unit cost of labor in the Bulgarian economy;
Compensation per employee for the entire economy;
Labor productivity for the entire economy; annual percentage change**



Source: ECB. Convergence Report June 2016, p.72

The low labor productivity is an obstacle to the process of the income convergence of Bulgaria with other EU countries. Bulgaria's membership in the EU is clearly not a fundamental factor that will automatically lead to an improvement in labor productivity. What matters are other factors related to the structure of production and the prospects for its development. The pace of economic growth, though positive, cannot compensate for the imbalances accumulated in the economy in the past and it cannot boost productivity.

The World Bank report for 2015 emphasizes that the labor productivity of the Bulgarian economy is the lowest in comparison with those of the countries of Central and Eastern Europe (Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia and Romania) and that it is below the average level of labor productivity for the entire EU. (*Productivity in Bulgaria, Trends and Options*).

Raising labor productivity is a function of several factors such as demographic trends, indicators of workforce qualification and level of innovation and new technologies in the industry. Due to the negative demographic indicators in Bulgaria, improving labor productivity depends on the implementation of effective and innovative production and instead of only relying on the expansion of the services sector in the domestic economy.

The improvement of labor productivity is closely connected to: the improvement of the quality of education (particularly that of primary and higher education, for which effectiveness is still a challenge); stimulating lifelong learning; the introduction of innovative techniques in the real sector, etc. If enterprises overcome the misallocation of resources on the company level and on the sectoral level, they would be 100% effective and labor productivity in industry could grow to up to 80%. (*Productivity in Bulgaria, Trends and Options*)

The convergence of incomes and the improvement in labor productivity affect the dynamics of the convergence of price levels in Bulgaria in comparison to those of other EU countries. In the short-term, fluctuations in the nominal exchange rate, the changes in food prices and the effective use of resources affect inflation differentials, which in turn prevents price convergence. Some structural factors, such as trade liberalization and competition in the commodity markets also affect real convergence. Standing at 100% for the euro area, the price level in Bulgaria increased from 47.5%

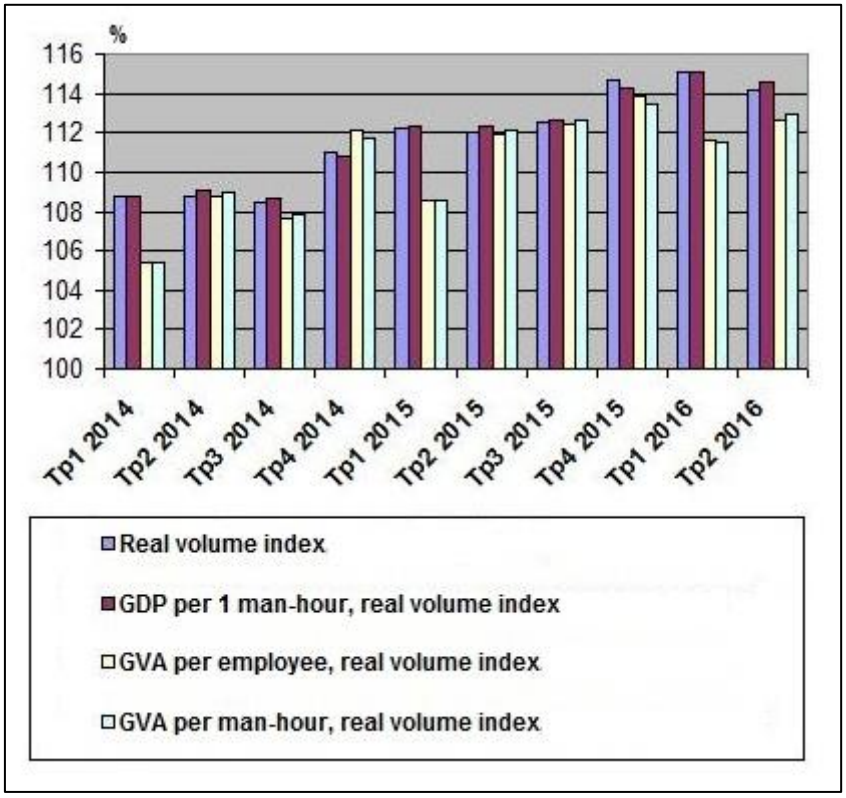
in the period 2006-2015 to 48.3% in the period 2011-2015. The unit cost of labor is an indicator for defining the competitiveness of production. Data show that the unit cost of labor rose to a greater degree than labor productivity in the period 2011-2014, and that it decreased in 2015. (*Fig. 3*)

Compared to other countries in Central and Eastern Europe, it would seem that wages in Bulgaria are growing at a higher rate even when they are not consistent with labor productivity. Wage growth is higher compared to the growth in labor productivity, which affects the level of cost competitiveness.

At first glance it would seem that Bulgarian external competitiveness is influenced positively by the low level of wages in the EU. According to data from 2013, the average hourly pay for work done in the EU-28 (excluding wages in agriculture and public administration) amounted to € 23.7 for the EU and € 28.4 in the euro area countries (17 Member States (EU17). The average hourly pay per man-hour in the EU does not reflect the significant differences that exist between the countries. In Bulgaria, one unit of work done is paid an average of € 3.7, while in Romania it is paid an average of € 4.6. Calculated based on the purchasing power standards (PPS), wages in Bulgaria amount to 37% of the EU average. The low hourly wages of labor in Bulgaria do not mean that the country earns good competitive positions against counterparties in the EU, because the level of labor productivity in Bulgaria is lower.

The index of the physical volume of production decreased in 2016 (second quarter), but since the beginning of 2016 the indicator of GDP per man-hour has improved in comparison to the fourth quarter of 2014. The gross value added (GVA) per 1 man-hour is also increasing, which gives grounds to assume that in some sectors of the economy wages are beginning to rise, while still keeping in mind that they are the lowest in the EU. (*Figure 4*)

Figure 4 - Real volume index, GDP per 1 man-hour, real volume index, GVA per employee, real volume index, GVA per man-hour, real volume index (2010=100%)*



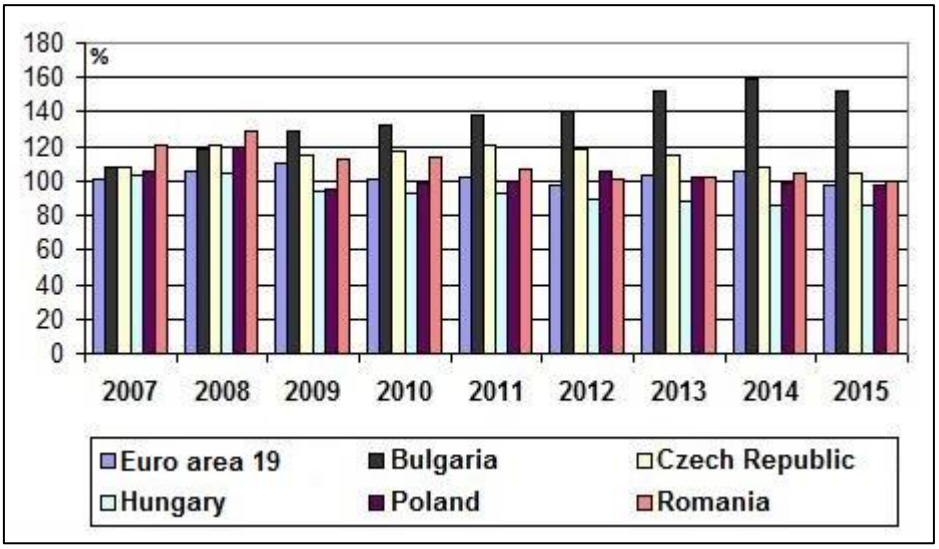
** Tp1, 2 means first quarter, second quarter, and so on/etc.*

Source: NSI

The increase in the unit cost of labor s does not affect the foreign trade of Bulgaria. This is due to some improvement in the indicators characterizing the external competitiveness of Bulgarian exports. The growth of the GVA per man-hour is compensated for by the effects of non-price factors such as improving the quality of products for export, the availability of favorable export prices and reductions in the prices of oil and basic raw materials for the production of goods, etc.

The appreciation of the equilibrium real exchange rate shows that convergence is taking place at the price level, which is the consequence of economic catch-up (*De Grauwe and Schnabl, 2005*). The REER depends not only on changes in the exchange rates, but also on trends in prices and costs. The REER in Bulgaria began to deteriorate after 2009. In recent years, the level of this index for Bulgaria has increased by 60% in comparison to the levels in 2005, when it was adopted as being = 100, which means that the competitiveness of Bulgaria is deteriorating in comparison to its level before the crisis and in comparison to the competitiveness of the countries of Central Europe and Romania. (*Figure 5*)

Figure 5 - Real Effective Exchange Rate (REER) in relation to the 37 trade partners of Bulgaria, euro area - 19 countries, the Czech Republic, Hungary, Poland and Romania. The rise in the index means a drop in competitiveness (2005 = 100%)



Source: Eurostat

The deteriorating position of export competitiveness shows that Bulgaria still has not overcome the macroeconomic imbalances accumulated as a result of the economic crisis. The strictly fixed exchange rate of the lev under the rule of the Currency Board does not allow exchange rate fluctuations in order to gain competitive advantages. It cannot be assessed to what extent the domestic firms that work for export are experiencing the pressure of changes in international prices and what the possible future costs conclusions that can be made are. The movements of the REER, which show the deterioration in competitiveness, suggest that the process of the real economic convergence of Bulgaria is slowing down. For Bulgaria, improving the labor productivity and the competitiveness of production is an important challenge for its economic catching-up within the EU, as well as in comparison with the Central and Eastern European EU Member States.

Main Findings

Economic convergence and the convergence of economies are a complex economic and political objective, which is difficult to assess. The convergence of economies, the economic catch-up and the convergence are seen, in the context of their evaluation, in nominal and in real terms. The changes in the main macroeconomic variables are essential when a Member State enters the ERM II and, respectively, adopts the euro. In essence, the EMU proves to be unequipped to counter the economic and sovereign debt crisis. The freezing of wages (or internal devaluation), which is the preferred mechanism for the correction and balancing of the economy, in actuality creates deflation. There is growing pressure on European economies and the real economic convergence is being hindered.

Bulgaria has strictly followed the Maastricht criteria for years and has stated its intention to become part of the euro area. The process of real economic convergence shows that Bulgaria is lagging behind other EU countries in terms of GDP per capita, improving labor productivity and convergence of income. Despite Bulgaria's efforts to stimulate economic growth and labor productivity, the improvement of the competitiveness of the Bulgarian economy depends on the

processes that are undergoing development in the EU. Bulgaria's membership in the EU does not mean an automatic and rapid economic convergence. As stated, the Member States are part of different business cycles and they have varying degrees of economic and social development. The process of income convergence is a function of the improvement in labor productivity and of the increase in the competitiveness of products in foreign markets. The country should implement targeted policies in all areas of the economy in order to provide the necessary support for stimulating the process of income convergence. The development of an efficient industry and the application of innovative technologies, combined with investment in the education and skills of the labor force are a priority. The deepening of the differences in the economic development and the economic business cycle does not allow mechanical cohesion, because the results can backfire and strengthen divergent economic factors, which does not contribute to real economic convergence between the countries.

Bibliography

Andor L, (2014), Cohesion and Convergence in Europe, Lecture at Warsaw School of Economics.

Bartosz J, H. Ponikowski, (2014) Real convergence, economic crises and EU cohesion policy, Cambridge Conference Business&Economics, Cambridge, UK.

Christova-Balkanska I., (2014), Economic Development of Bulgaria and Romania in the Post Crisis Period Journal Of Financial and Monetary Economics, 1, Annual Review, “Victor Slavescu” Centre for Financial and Monetary Research http://jfme.icfm.ro

Dauderstadt M., (2014), Convergence in Crisis, European Integration in Jeopardy, Friedrich Ebert Stiftung, International Policy Analysis.

De Grauwe, P., Schnabl G. (2004), Nominal versus Real Convergence with Respect to EMU Accession EMU Entry Scenarios for the New Member States.

* * *, Bulgaria: A Program for Financial Sector Assessment – a detailed assessment of the compliance with the Basle Core Principles for Effective Banking Supervision", October 2015, Country report № 15/295, IMF.

* * *, Productivity in Bulgaria, Trends and Options, June 2015, Document of the World Bank, pp.1-137.

* * *, ECB. Convergence Report June 2016

* * *, Real convergence in the euroarea, evidence, theory and policy implications, (2015), ECB Economic Bulletin, Issue 5.

* * *, ECB Economic Bulletin, Issue 5 / 2015 – Article p.30

* * *, European Commission In depth review for Bulgaria, (2012) European Economy, Occasional Paper 209

* * *, Macroeconomic Imbalances, Bulgaria, 2014, (March 2014), European Economy, Occasional Papers 173, EU, ecfin-info@ec.europa.eu p. 1-39.

CROSS-BORDER CONNECTIONS IN CENTRAL BANKING

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Abstract

After the global financial crisis outbreak, there are intensified debates on the cross-border spillovers effects induced by unconventional monetary policy of major central banks in developed countries. Based on this observation, the present paper makes a short analysis on the relationship between central banks in post-crisis time, focused on the connection between major central banks (Fed, ECB) and other central banks of local (i.e. national) interest. For an open economy, the central bank's responsibility in promoting the financial stability extends beyond the national borders, becoming a regional or even a global responsibility. At the global level, a great challenge remains the way in which the cooperation between monetary authorities can be strengthened, even in normal times. The major locally-driven effects generated by the global central banks decisions requires further exploration of new areas of cooperation that can limit the accumulation of financial imbalances and vulnerabilities in the economy.

Keywords: unconventional monetary policy, spillover effects, central bank cooperation

JEL classification: E52, E58, F42

Introduction

Central banks have a major role concerning the domestic strategy for sustaining the economic growth and also for mitigating the instability of the financial system. For an open economy, the central bank's responsibility in promoting the financial stability extends beyond the national borders, becoming a regional or even a global responsibility. Statutory, central banks assume objectives of local (national) interest, typically the domestic price stability objective, but the globalization of financial and trade relations points out the need to restore this local objective reconsidering the global economy, especially for those central banks with a major role in the global financial system.

The subject covered in this article belongs to the area of concerns about the effects of the global financial integration process. The financial development and the strengthening of the international economic and financial relations create strong connections between the global economy and the local economies, between the global authorities (whose decisions have global effects) and local ones. The present paper is focused on a short description of the relation between the major central bank from a developed country and the local central bank, from an emerging economy, in order to highlight the relevance of the cross-border connections between central banks, in recent years, after the global financial crisis outbreak. It highlights some issues of a broader research project regarding the global and local relationship in the central banks' policy.

Unconventional measures implemented to a large extent by central banks in advanced countries have spillover effects in emerging economies, and if these effects conflict with the domestic economic policy objectives, including those of the monetary policy, the local authorities (also, central banks) reacts in order to counteract the unsought effects.

Challenges of the International Linkages

In recent years, a number of studies have focused on the cross-border transmission of the monetary policy shocks from the advanced major economies and their impact on the global financial conditions. Rey (2013) evidences the working of a global financial cycle for capital flows, asset prices, and credit growth, driven mainly by the Fed's monetary policy, which change the "classical" hypothesis of the impossible trinity (the Mundell-Fleming "trilemma") into a dilemma, considering that an independent monetary policy is possible provided that there is a direct or indirect control of the capital account. When the cross-border flows and the leverage of global institutions are significant, the monetary policy is globally spread, even under a flexible exchange rate regime. In other words, the increase of the volume for the cross-border financial flows and the

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financial leverage of the global institutions within a certain economy facilitate the transmission of the global monetary policy at the local level.

In the context of the global financial crisis and the post-crisis period, the classical monetary trilemma must be reinterpreted, noting that the functioning of the policy levers for ensuring the financial stability at the local (national) level is weakening as the international financial integration is getting deeper (the financial trilemma).

It has been argued that the transmission of the US financial conditions to other economies through the global financial cycles cancels or at least alters the efforts of the local central bank to manage the domestic monetary policy. According to International Monetary Fund (IMF) estimates (IMF, 2017), the global financial conditions are determinant in proportion of 20% to 40% for the domestic financial conditions.

The local central bank's ability to control the long-term domestic interest rates, which are important variables in the money transmission mechanism, is impaired by the global financial cycle.

There is an abundant literature dealing with the domestic transmission of the monetary policy decisions, reviewed by Krishnamurthy and Vissing-Jorgensen (2011)[81]. Nevertheless, the concerns about the international transmission of monetary policy decisions are increasing, mainly after the outbreak of the global financial crisis, as the major central banks in advanced countries have begun to apply a variety of unconventional measures.

The quantitative easing measures applied by central banks in advanced countries have financial effects on the liquidity, risk aversion and relative price of capital (equity, bonds, real estate). By changing the liquidity level, the quantitative easing policy can influence both the level of the bank reserves, and thus the bank lending, and the net wealth of banks and firms. These two sub-components of the lending channel are expanding internationally, given the growing importance of the cross-border lending for both banking and non-banking sector[82].

The higher external openness of the local financial systems and the increasing of the cross-border financial flows influence the domestic credit conditions, both by the access of banks to the money and interbank markets, and by the issue of international bonds and securities (Lane and McQuade, 2014).

Caruana (2013) underlines that the quantitative easing measures applied by global central banks have influenced emerging countries by: lowering policy interest rates, reducing domestic bonds yields, influencing the global asset allocation by increasing fluctuations of both the exchange rates for local currencies and the foreign exchange reserves. Besides, these measures have increased the currency mismatch through the accumulation of local currency assets and foreign currency liabilities, and also they have influenced the domestic capital markets of emerging economies through the cross-border capital flows.

Considering the general remarks on the functioning of the transmission channels for foreign monetary policy, the central bank connections address the variables that link the global monetary policy to the local one: the exchange rate, the short-term interest rates, the long-term interest rates and the cross-border capital flows, with their components: the international bank lending flows and the portfolio flows. The global-local connection concerning the central bank policy is seen in terms of the relationships between emerging and advanced economies, following the reaction of the four variables to the global monetary policy, i.e. the Fed monetary policy, for the emerging economies linked to the US dollar, and the European Central Bank (ECB), for the emerging economies linked to the euro.

[81] *For the domestic economy, the monetary policy signals are transmitted through three relevant channels: the exchange rate channel, the expectations channel, and the interest rate channel.*

[82] *In the globalization era, in emerging economies, there is a tendency for the non-financial corporations to significantly increase their external borrowing and debt issuance on the external market, increasing the role of the non-bank funding.*

Highlights on Cross-Border Connections in Monetary Policy[83]

In open economies, the exchange rate is an important channel for transmission of the external monetary conditions, and its role depends on the extent to which the exchange rate regime is flexible. This flexibility allows a reduction in the external interest rate to determine the appreciation of the domestic currency.

In the post-crisis period, mainly during May - September 2013 and the early of 2014, the capital outflows in emerging economies led to strong exchange rate depreciation, as a result of the Fed's announcement of monetary policy normalization.

The persistent fluctuations in the cross-border financial flows and the increased risks to the financial stability have led to a greater focus of central banks on the exchange rate, as a commonly used tool, for those central banks with a flexible exchange rate regime.

Monetary policy decision-makers carefully monitor developments in the exchange rate on the assumption that this would be an important channel for transmitting the unconventional monetary policy measures from abroad. When the financial channels (the risk channel, the portfolio channel and the wealth effect channel) and capital flows are important, controlling the exchange rate movements cannot prevent the transmission of the unconventional monetary policy of the global central bank into emerging economies dependent on it. Such a remark is also shown by Falagiarda et al. (2015) for the case of the relationship between the unconventional monetary policy of the ECB and that of non-euro area countries (Czech Republic, Hungary, Poland and Romania). Central banks do not intervene in the exchange rate market for any exchange rate change to maintain a certain exchange rate level, as the costs and risks involved are not insignificant. Central bank foreign exchange interventions aim at lowering the exchange rate volatility, rather than targeting a certain exchange rate level, with a more focusing on the exchange rate fluctuations.

The central banks of emerging economies can react directly to changes in monetary policy rates by altering their own interest rates, with a leader's follow-up behaviour. Taylor (2013) argues that emerging economies can follow such an imitation policy to avoid the unfavourable effects on the exchange rate that would result in an increase in the gap between the domestic interest rates and the external interest rate., as the exchange rate appreciation hinders the long-term competitiveness, and a possible exchange rate overvaluation would encourage the foreign currency lending, whose value is relatively lower.

In the emerging economies linked to US dollar, the tendency of following the leader (i.e. the Fed) is less pronounced than in the emerging economies linked to euro. In the early stage of the monetary easing measures implemented by the Fed, when the Federal Reserve rate reached the minimum level, there was a clear proclivity of the local central banks towards cutting the policy interest rates, reflecting the behaviour of following the leader. However, after the completion of the first quantitative easing program, the synchronization is no longer maintained, with interest rates becoming quite divergent across countries. This shows that the monetary policy rate continues to be a major instrument by which the central bank responds to the domestic challenges. After the "taper tantrum" shock[84], the divergence of the policy rates is even more obvious. Instead, for the emerging economies linked to the euro, the synchronization of interest rate developments is more pronounced.

Central banks in the emerging countries lose the ability to influence the long-term domestic interest rates, due to the global financial cycle. Moreover, the long-term interest rate in the US influences the benchmark on long-term global bond yield as well as investor risk appetite (Turner, 2014), so that the price of bonds issued by emerging economies on local and international markets depends on the dynamics of the external financial markets.

In addition to the trend of expanding the domestic bond markets in emerging countries, there are also an increasing number of foreign investors in the local currency bonds markets. In this way, the yields on the "local bonds" become more closely linked to the yields of securities in the major financial

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[83] *The data referred to in this section is provided by the research project "Raportul global-local în politica băncilor centrale" ("The Global-Local Relationship in the Central Banks' Policy"), Criste A. (coord.),"Victor Slăvescu" Centre for Financial and Monetary Research, 2017.*

[84] *This term refers to the effects produced by the Fed's announcement (May 2013) on the normalization of the Fed monetary policy by slowly reducing the pace of its monthly purchases of financial assets.*

centres. Through these strong connections, especially after 2008, the monetary policy of global central banks tends to have a growing influence on the long-term yields evolution for the emerging economies.

A forward-looking challenge for central banks in emerging economies concerns the asset prices valuation and their influence on the long-term yields, as traditional domestic benchmarking tools and the local market valuations have lost their anchoring role. Basically, asset prices have become increasingly dependent on expectations of future monetary policy developments in the US, and thus, the apparently insignificant changes in monetary policy, can cause large fluctuations in the financial market.

One of the main influence factors on the interest rates developments in the financial markets is the forward guidance policy. By this instrument, the central bank conveys signals about the monetary policy outlook and guides expectations for the future short-term interest rates. However, this instrument is not available to central banks from the emerging economies, as it implies conditions that are specific to a highly credible central bank. This credibility is assured not only by a greater experience in communication with the public and markets, through a variety of instruments, but also by a well-endowment with advanced technical instruments and methods for forecasting and a greater specialization in the quantitative forecasting of macroeconomic and financial variables. The practical experience shows that central banks from advanced economies, especially the major ones, apply this forward guidance policy, starting from the prerequisite that the public commitment of a global central bank to continue maintaining low interest rates in the future, will reduce the long-term interest rates, generating further changes across countries on the gap between bond yields across the range of maturities.

It can be argued that by means of monetary easing measures, the global central banks aims at controlling the long-term interest rate developments Besides, the forward guidance is an additional tool that guides the market so that to reach the "intermediate target". Even if local central banks do not have the capacity to influence the long-term interest rates (given the dominant external factor), they can adjust their monetary policy according to the signals transmitted by the global central banks in this regard.

The quantitative easing measures applied by central banks in developed countries have increased the global liquidity. Under these circumstances, the cross-border capital flows tend to be large and swift, with a quick reversibility, and therefore they are important challenges for the financial and macroeconomic management in emerging economies.

According to statistical data from Bank of International Settlements (BIS debt securities statistics), after 2008, the gross capital flows from and to the emerging economies have more fluctuating developments. Also, emerging economies are experiencing a massive expansion of debt securities issued by companies on international markets, especially after 2010. Recent changes in the dimension and structure of capital flows could be factors that amplify the vulnerabilities of emerging economies. Debt-based financing could be pro-cyclical, when there are a few large asset management companies that adopt similar strategies for investments in assets of emerging economies, thus contributing to asset price dynamics. Also, by holding such securities denominated in local currency (of emerging economies), the investors are exposed to the foreign exchange risk, and in times of stress in the economy, the sudden depreciation of the exchange rate amplifies the tensions in the financial markets by increasing the sales of such vulnerable securities.

Addressing the challenges posed by cross-border capital movements, the central banks from emerging economies have a limited capacity of reaction, depending on how they refer to the policy of the financial stability.

Monetary policy may remain independent of the external factors influence, if there is a control over the capital movements. The difficulties in coordinating the monetary policies at the global level call into question the need for a capital flows management, a measure that, alongside macroprudential measures, extends the range of instruments used by local central banks. However, based on the practical experience, the macroprudential tools have not always been effective over time.

Final Remarks

The working of the four (indirect) connections between the two categories of central banks was better highlighted in postcrisis time, after the "taper tantrum" shock. In this context, it is remarked an increasing importance of connections through both the exchange rate channel and the capital

flows, especially for those emerging economies that have a flexible exchange rate regime. During the analysed period, many central banks intervened in the foreign exchange market primarily in order to reduce the volatility, and not to maintain a certain exchange rate level. Although, in case of higher financial openness the exchange rate flexibility cannot provide a full protection against the external shocks, this quality is useful for many economies in that it provides to monetary policy additional room for manoeuvre. Obstfeld et al. (2017) shows that emerging economies with fixed exchange rate regime are more exposed to the global financial conditions that may increase the financial vulnerabilities (either sharp increases in domestic lending and real estate prices, or rising the bank leverage).

The link through the capital flows has been strengthened in the post-crisis period, as a result of their consequences upon the financial and macroeconomic stability, stemming from the sudden changes in both the size and the orientation (reversals) in capital movements. The recent experience of many economies has shown that prudential national policies cannot be fully effective when the capital markets are open to the cross-border transactions, even when the exchange rate regime is flexible. Thus, such a condition points to the need for formulatng the international collaborative reform at a global level. Within this framework, the relationship between central banks should be based on the cooperation and coordination, in terms of monetary policy and exchange rate policy, at least. Policy makers in those countries that generate large capital flows should consider how their own policies (including monetary policy) can influence the overall economic and financial stability, and cross-border coordination should mitigate the risks in this direction.

The major locally-driven effects, particularly at the emerging economies level, generated by the global central banks decisions requires further exploration of new areas of cooperation that can limit the accumulation of financial imbalances and vulnerabilities in the economy. However, there is some uncertainty about the possibility of maintaining such intense cooperation in normal times. Under normal conditions provided by the financial and economic stability, each central bank will act primarily on the interest of its own country (in case of ECB, for the euro area member countries), with global interest being second.

At the global level, a great challenge remains the way in which the cooperation between monetary authorities can be strengthened, even in normal times, when it can be apply "counter-cyclical" measures in order to be prepared for countering the future global financial crisis episodes. Within this framework, it is important to enter international agreements supported by additional measures at the national level.

Bibliography

Caruana, J. (2013). Ebbing global liquidity and monetary policy interactions, speech delivered at the Central Bank of Chile Fifth Summit Meeting of Central Banks on Inflation Targeting: “Global liquidity, capital flows and policy coordination”, Santiago, Chile, 15 November.

Falagiarda, M., McQuade, P., Tirpák, M. (2015). Spillovers from the ECB’s nonstandard monetary policies on non-euro area EU countries: evidence from an event-study analysis, ECB Working Paper Series, No 1869, November.

Krishnamurthy, A., Vissing-Jorgensen, A. (2011). The effects of quantitative easing on interest rates: channels and implications for policy, Brookings Papers on Economic Activity, 2, pp 215-287.

Lane, P.R., McQuade, P. (2014). Domestic credit growth and international capital flows, Scandinavian Journal of Economics, Vol 116, No 1, January, pp 218-252.

Obstfeld, M., Ostry, J.D., Qureshi, M.S. (2017). A Tie That Binds: Revisiting the Trilemma in Emerging Market Economies, IMF Working Paper, WP/17/130, June.

Rey, H. (2013). Dilemma not trilemma: the global financial cycle and monetary policy independence, in: Federal Reserve Bank of Kansas City Jackson Hole Economic Symposium Proceedings, pp 285-333.

Taylor, J. (2013). International monetary policy coordination: past, present and future, BIS Working Papers, no 437, decembrie.

Turner, P. (2014). The global long-term interest rate, financial risks and policy options in EMEs, BIS Working Papers, no 441, februarie.

* * *,(2017). Global Financial Stability Report October 2017: Is Growth at Risk? International Monetary Fund.

INDUSTRIES STOCK RETURN REACTIONS TO RISK FACTORS: AN EMPIRICAL INVESTIGATION ON THE G-7 COUNTRIES

Mahdy F. ELHUSSEINY[85],[86], PhD

Abstract

The main objective of this paper is to add to the limited amount of literature by identifying and examining the extent to which innovations in several key local macroeconomic factors are reflected in the performance of different local industries stock returns across G-7 Countries.

The findings of this study can be beneficial to investors and practitioners by improving their understanding of how local risk factors influence investment returns of different industries. Such an understanding should enable investors and practitioners to make more informed decisions with regard to allocating, timing, and diversifying their investment portfolios.

Keywords: macroeconomics, industry stock returns, financial risk

JEL classification: E17, E43, E44, E47

Asset Pricing Models

The first to explore a set of macroeconomic factors as proxies for undefined state variables.

Macroeconomic factors are strong candidates for risk factors, because it is believed that macroeconomic factors have influenced firm's cash flow and structure of available investment opportunities.

This Paper employs a multifactor pricing model in investigating the response of industry stock returns in developed countries to a set of local risk factors based on the work of Chen, Roll, and Ross (1986).

Two Stream of Researches

Most of the work on this topic has been carried out to investigate the effect of different sets of local risk factors on the returns of either individual or portfolios of stocks regardless of industry type.

Fama (1980), Pearce and Roley (1985), Chen, Roll, and Ross (1986), Hardouvelis (1987), Hamao (1988), Wasserfallen (1989), Poon, and Taylor (1991), Ferson and Harvey (1994),Flannery and Protopapadakis (2002), and Altay (2003)

Industry-Oriented Approach

Studies on industry returns and risk have been very limited in number and scope.

Saunders (1990), Ewing (2002), Grammenos and Arkoulis (2002),and Kavussanos, Markoulis and Arkoulis (2002).

Main Objective

The main objective of this paper is to add to the limited amount of literature by identifying and examining the extent to which innovations in several key local macroeconomic factors are reflected in the performance of different local industries stock returns across G-7 Countries.

The main Question

Whether and to what extent do returns on local industries respond to changes in local macroeconomic risk factors?

Contributions

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The results of this study should provide valuable empirical and practical contributions as follows: the findings of this study should add to the limited research of the impact of local risk factors on the industry returns.

The findings of this study can be beneficial to investors and practitioners by improving their understanding of how local risk factors influence investment returns of different industries. Such an understanding should enable investors and practitioners to make more informed decisions with regard to allocating, timing, and diversifying their investment portfolios.

Methodology

Introduction

- CAPM suggests that market return is the only relevant factor to influence asset returns.

- APT suggests that asset returns are more sensitive to unexpected change in a number of macroeconomic factors.

- Considerable amount of studies use unexpected components of macroeconomic factors based on the assumption that efficient markets respond only to unexpected changes;

- Univariate ARIMA (auto-regression integrated moving average) models are used for this purpose.

Steps measurement of the actual values

Test for stationarity

ARIMA (auto-regression integrated moving average)

Subtract ARIMA expected values from actually observed time series to construct the unexpected values.

The Multifactor model

$$r_{it} = \alpha_i + \sum_{j=1}^{k} \beta_{ij} F_{jt} + \varepsilon_{it}$$

r_{it} = The excess return

Where, $r_{it} = R_{it} - R_{ft}$

R_{it} = The return for industry i at time t

R_{ft} = Risk free interest rate

α_i = The constant term

β_{ij} = Are the betas of the rit on the k risk factors

F_{jt} = Are the risk factors where j = 1….k

ε_{it} = The error term, which represents the non-systematic excess return relative to risk factors,

- K local risk factors:
  - Industrial production;
  - Inflation rate;
  - Changes in expected inflation;
  - Term structure;
  - Foreign exchange rate;
  - Oil price;
  - Return on national equity market portfolio.

Data Analysis

Description of data sets and sample period

Two different data sets are used.

The first data set includes monthly industry stock returns for five industries of each country.

The second data set consists of monthly macroeconomic factors.

Monthly returns are measured for January 1985 to December 2004

Empirical Results- See Tables in the research papers down.

Results, Discussions, and Conclusions

The Multifactor Model Results (Local Factors)

The results based on the multifactor model show that local risk factors have a strong explanatory power in accounting for the variations of the monthly industries excess returns in the five countries. Specifically, they explain between 27% and 56% of the return in Canada, between 26% and 73% in Germany, between 35% and 74% in Japan, between 44% and 72% in the U.K., and between 25% and 51% in the U.S. over the period of January 1985 to December 2004.

Comparing R2 in all countries where the local market excess return is the only explanatory factor with R2 of the multifactor model, we conclude that the local market excess return is the most important explanatory factor among local risk factors.

A uniform effect on industries stock returns has been found regarding the macroeconomic risk factors.

Table 1

Industrial stock returns reactions to local macroeconomic risk factors for Canada (January 1985 To December 2004)

Industry	Constant	UIP-C	UI-C	DEI-C	UTS (-1)-C	UFX-C	UOG-C	CWMKT-C	N	R^2. adj	DW	R^2 MKT
Banks	0.0015 (1.2890)	-0.5469 (-1.0118)	0.14851 (1.6409)	01420 (0.0912)	-2.9233 (-0.8296)	-0.0409 (-0.1936)	0.0068 (0.2348)	0.8260 (13.7049)***	213	0.5038	1.9369	.5042
Chemicals	-0.0009 (-0.6039)	0.2319 (0.3116)	-0.5753 (-0.4616)	-0.2564 (-0.1196)	0.5391 (0.1111)	0.1739 (0.5981)	-0.0344 (-0.8703)	0.7362 (8.7713)***	213	0.2718	1.8241	.2852
Insurance	-0.0002 (-0.1567)	1.0042 (-1.2015)	-0.1796 (-0.1283)	-0.5805 (-0.2411)	-0.5357 (-0.0983)	0.4715 (1.4437)	-0.1243 (- 2.7976)***	0.8325 (8.9339)***	213	0.2961	1.9201	.2601
Telecommu nications	-0.0007 (-0.7267)	-0.2324 (-0.4645)	-0.3290 (-0.3927)	-1.5983 (-1.1087)	-6.2910 (-1.9285)**	0.3597 (1.8395)*	-0.0077 (-0.2894)	0.8991 (16.1131)***	213	0.5678	2.805	.5238
Utility	-0.0004 (-0.4247)	-0.3085 (-0.5805)	-0.6194 (-0.6960)	0.4869 (0.3180)	-0.7371 (-0.2127)	-0.1206 (-0.5808)	0.0087 (1.8621)*	0.6099 (10.2929)***	213	0.3667	1.9842	.3825

Note: independent variables are unexpected industrial production (UIP-C), unexpected inflation rate (UI-C), changes in expected inflation (DEI-C), unexpected term structure (UTS (-1)-C),

unexpected foreign exchange rate (UFX-C), unexpected oil prices changes (UOG-C), and capitalization - weighted stock market index represented by SE-300 index (CWMKT-C). T-

values (in parenthesis). N is the number of observations for each local industry. DW is Durbin-Watson statistic.

*, **, *** Denote significance at the 10%, 5%, 1% level respectively.

R^2 is the coefficient of determination adjusted for degrees of freedom.

Source: elaborated by the author

Table 2

Industrial stock returns reactions to local macroeconomic risk factors for Germany (January 1985 To December 2004)

Industry	Constant	UIP-G	UI-G	DEI-G	UTS (-1)-G	UFX-G	UOG-G	CWMKT-G	N	R^2. adj	DW	R^2 MKT
Banks	0.0006 (0.6133)	-0.0329 (-0.2791)	-0.4658 (-0.5386)	1.0528 (0.8826)	-12.3785 (-2.2102)**	-0.2359 (-2.7260)***	0.0297 (1.1523)	1.0263 (24.6066)***	224	0.7398	2.0514	.7217
Chemicals	0.0016 (1.5376)	-0.0309 (-0.2681)	-1.2380 (-1.4643)	0.7359 (0.6309)	2.3795 (0.4345)	0.0243 (0.2878)	-0.0325 (-1.2920)	0.8474 (20.7809)***	224	0.6830	2.0088	.6713
Insurance	0.0002 (0.1658)	0.2631 (1.5474)	-2.8993 (-2.3245)**	0.3064 (0.1781)	-2.5148 (-0.3113)	-0.2458 (-1.9686)**	-0.0003 (-0.0096)	1.2642 (21.0136)***	224	0.6789	2.2430	.6766
Telecommu nications	-0.0021 (-0.8140)	0.0805 (0.2913)	1.6588 (0.8172)	-0.1298 (-0.0425)	10.6607 (0.7547)	-0.1543 (-0.7361)	-0.0749 (-1.2506)	0.8793 (8.3940)***	203	0.2660	2.0518	.2757
Utility	0.0014 (1.3336)	-0.0201 (-0.1717)	-0.0761 (-0.0885)	0.2461 (0.2075)	-8.9707 (-1.6106)	-0.0799 (-0.9287)	-0.0017 (-0.0684)	0.5350 (12.8982)***	224	0.4411	1.8989	.4461

Note: independent variables are unexpected industrial production (UIP-G), unexpected inflation rate (UI-G), changes in expected inflation (DEI-G), unexpected term structure (UTS (-1)-G), unexpected foreign exchange rate (UFX-G), unexpected oil prices changes (UOG-G), and capitalization - weighted stock market index represented by Toronto SE-300 index (CWMKT-G). T- Values (in parenthesis). N is the number of observations for each local industry. DW is Durbin-Watson statistic.

*, **, *** Denote significance at the 10%, 5%, 1% level respectively. R^2 is the coefficient of determination adjusted for degrees of freedom.

Source: elaborated by the author

Table 3

Industrial stock returns reactions to local macroeconomic risk factors for Japan (January 1985 To December 2004)

Industry	Constant	UIP-J	UI-J	DEI-J	UTS (-1)-J	UFX-J	UOG-J	CWMKT-J	N	R^2. adj	DW	R^2 MKT
Banks	-0.0006 (-0.4453)	-0.0587 (-0.4317)	1.7736 (1.3521)	-0.3090 (-0.3083)	-9.2965 (-1.5376)	-0.2308 (-2.1347)**	0.0363 (0.9892)	1.0968 (17.9604)***	224	0.0.597 7	2.1039	.5911
Chemicals	0.0001 (0.2046)	0.0921 (1.0828)	-1.1432 (-1.3941)	1.8106 (2.8903)***	9.9309 (2.6275)***	0.0795 (1.1768)	-0.0422 (-1.8358)*	0.9447 (24.7467)***	224	0.7434	2.0471	.7186
Insurance	0.0007 (0.5358)	-0.2791 (-2.2635)**	-0.8442 (-0.71.3)	0.1208 (0.1331)	-13.6707 (-2.4954)***	-0.2961 (-3.0232)***	-0.0397 (-1.1918)	0.9492 (17.1531)***	224	0.5870	1.8802	.5573
Telecommu nications	-0.0011 (-0.5957)	0.0134 (0.0819)	0.6537 (0.4140)	-0.8653 (-0.7173)	13.5079 (1.8558)*	-0.0856 (-0.6578)	0.0931 (2.1026)**	1.1396 (15.5005)***	224	0.5276	2.0689	.5054
Utility	-0.0005 (-0.3376)	-0.0980 (-0.7242)	-2.6185 (-2.0076)**	-0.3963 (-0.3977)	-21.5669 (-3.5875)***	-0.3479 (-3.2362)***	-0.0568 (-1.5533)	0.6009 (9.8968)***	224	0.0.354 2	1.8869	.2866

Note: independent variables are unexpected industrial production (UIP-J), unexpected inflation rate (UI-J, changes in expected inflation (DEI-J), unexpected term structure (UTS (-1)-J) unexpected foreign exchange rate (UFX-J), unexpected oil prices changes (UOG-J), and capitalization - weighted stock market index represented by Japan TOPIX index (CWMKT-J). T-

Values (in parenthesis). N is the number of observations for each local industry. DW is Durbin-Watson statistic.

*, **, *** Denote significance at the 10%, 5%, 1% level respectively.

R^2 is the coefficient of determination adjusted for degrees of freedom.

Source: elaborated by the author

Table 4

Industrial stock returns reactions to local macroeconomic risk factors for UK (January 1985 To December 2004)

Industry	Constant	UIP-UK	UI-UK	DEI-UK	UTS (-1)-UK	UFX-UK	UOG-UK	CWMKT-UK	N	R^2. adj	DW	R^2 MKT
Banks	0.0025 (2.3966)**	0.0852 (0.8383)	-1.6830 (-1.7242)*	-0.1365 (-0.2762)	1.6429 (0.5025)	-0.0497 (-0.5375)	-00247 (-0.9937)	1.1922 (23.36)***	224	0.7231	1.8859	.7103
Chemicals	-0.0009 (-0.7605)	-01374 (-1.1790)	0.9298 (0.8306)	-0.6708 (-1.1834)	-0.1625 (-0.0433)	-0.0335 (-0.3167)	0.0333 (1.1655)	1.0423 (17.8098)***	224	0.5975	1.9541	.5888
Insurance	-0.0021 (-1.3798)	-0.1571 (-1.0735)	1.1806 (0.8398)	0.5047 (0.7090)	-1.7037 (-0.3618)	-0.0714 (-0.5363)	-0.0140 (-0.3914)	1.2333 (16.7804)***	224	0.5716	1.8136	.5632
Telecommunications	-0.0001 (-0.0698)	0.1412 (0.9500)	1.0131 (0.7095)	0.4720 (0.6528)	0.8044 (0.1682)	0.1870 (1.3832)	-0.0730 (-2.0027)**	1.0124 (13.5623)***	224	0.4594	1.8591	.4566
Utility	-0.0007 (-0.6670)	-0.0099 (-0.0962)	-0.1622 (-0.1632)	0.1764 (0.3506)	-9.0903 (-2.7317)***	0.0325 (0.3461)	0.0307 (1.2108)	0.6818 (13.1278)***	224	0.4462	2.1542	.4414

Note: independent variables are unexpected industrial production (UIP-UK), unexpected inflation rate (UI-UK), changes in expected inflation (DEI-UK), unexpected term structure (UTS (-1)-UK), unexpected foreign exchange rate (UFX-UK), unexpected oil prices changes (UOG-UK, and capitalization - weighted stock market index represented by UK FTA index (CWMKT-UK).

T- Values (in parenthesis). N is the number of observations for each local industry. DW is Durbin-Watson statistic.

*, **, *** Denote significance at the 10%, 5%, 1% level respectively.

R^2 is the coefficient of determination adjusted for degrees of freedom.

Source: elaborated by the author

Table 5

Industrial stock returns reactions to local macroeconomic risk factors for USA (January 1985 To December 2004)

Industry	Constant	UIP-USA	UI-USA	DEI-USA	UTS (-1)-USA	UFX-USA	UOG-USA	CWMKT-USA	N	R^2. adj	DW	R^2 MKT
Banks	-0.0001 (-0.0743)	-0.6178 (-0.9007)	-2.7200 (-1.6597)*	1.8876 (1.0648)	-8.9090 (-1.6186)	0.2177 (1.6861)*	-0.0334 (-1.0611)	0.9668 (13.5024)***	224	0.5111	2.2818	.5046
Chemicals	-0.0001 (-0.1222)	0.5025 (0.7982)	2.1838 (1.4517)	-0.3507 (-0.2155)	5.3364 (1.0562)	-0.1443 (-1.2177)	-0.0072 (-0.2511)	1.0092 (5.3538)***	224	0.5153	2.3570	.5192
Insurance	0.0003 (0.2255)	-0.1747 (-0.2588)	0.3597 (0.2246)	-0.1296 (-0.0749)	-10.1239 (-1.8016)*	0.2240 (1.6638)*	-0.0452 (-1.5105)	0.9405 (12.2499)***	182	0.4815	2.3802	.4762
Telecommunications	-0.0018 (-1.3881)	-0.2846 (-0.4200)	-1.6747 (-1.0342)	-0.1188 (-0.0678)	6.0207 (1.1071)	-0.0113 (-0.0887)	-0.0124 (-0.4008)	0.7975 (11.2719)***	224	0.3814	1.9972	.3982
Utility	-0.0021 (-1.8645)*	0.1886 (0.3230)	0.8194 (0.5872)	0.1539 (0.1020)	-20.0915 (-4.2872)***	-0.0554 (-0.5046)	-0.0103 (-0.3842)	0.4352 (7.1383)***	224	0.2533	1.9793	.2213

Note: independent variables are unexpected industrial production (UIP-USA), unexpected inflation rate (UI-USA), changes in expected inflation (DEI-USA), unexpected term structure (UTS (-1)-USA), unexpected foreign exchange rate (UFX-USA), unexpected oil prices changes (UOG-USA), and capitalization - weighted stock market index represented by S&P500 index (CWMKT-USA).

T- Values (in parenthesis). N is the number of observations for each local industry. DW is Durbin-Watson statistic.

*, **, *** Denote significance at the 10%, 5%, 1% level respectively. R^2 is the coefficient of determination adjusted for degrees of freedom

Source: elaborated by the author

Bibliography

Nai-Fu Chen, Richard Roll, Stephen A. Ross, (1986), Economic Forces and the Stock Market, The Journal of Business, vol.59, no.3, 1986, p.383-403

Eugene F. Fama, Agency Problems and the Theory of the Firm, Source: The Journal of Political Economy, Vol. 88, No. 2 (Apr., 1980), pp. 288-307 Published by: The University of Chicago Press

Wayne Ferson, Campbell Harvey, (1994), Sources of Risk and Expected Returns in Global Equity Markets, Journal of Banking and Finance, 1994, pp. 775-803

Mark J. Flannery, Aris Protopapadakis, (2002), Macroeconomic Factors Do Influence Aggregate Stock Returns, The Review of Financial Studies, Summer 2002, vol.15, no.3, p.751-782, https://ssrn.com/abstract=314261

Costas Th Grammenos, Angelos G.Arkoulis, Macroeconomic Factors and International Shipping Stock Returns, Maritime Economics & Logistics, 2002, vol. 4, issue 1, 81-99

Yasushi Hamao, (1988), An empirical Examination of the Arbitrage Pricing Theory: Using Japanese Data, Japan and the World Economy, 1988, vol. 1, issue 1, 45-61

Gikas A.Hardouvelis, (1987), Macroeconomic information and Stock Prices, Journal of Economics and Business, Volume 39, Issue 2, May 1987, Pages 131-140

Manolis Kavussanos, Stelios Marcoulis and Angelos Arkoulis, Macroeconomic factors and international industry returns, Applied Financial Economics, 2002, vol. 12, issue 12, 923-931

S. Poon, S. J. Taylor, (1991), Macroeconomic Factors and the UK Stock Market, JBFA, Journal of Business Finance&Accounting, september 1991

Walter Wasserfallen, (1989), Macroeconomics News and the Stock Market: Evidence from Europe, Journal of Banking & Finance, 1989, vol. 13, issue 4-5, 613-626

FINANCIAL SOLUTIONS GLOBTECH – FINTECH

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Abstract

The economic paradigm, based on the so-called startup system,that supports these mega-platforms, however, has failed. The start-up successful initiative are very few and are driven to ambiguous venture capital companies ending into join the commonly known Facebook and Google. One alternative to the said system is to generate DECENTRALISED economies.

The network economy must be managed openly by a 'third entity' - which we can call it 'microeconomics', 'crowd funding', 'commons economy', 'decentralized P2P network', 'public infrastructure'. It is therefore a question of creating free networks *'free platform societies'*, with economic architecture based on cooperation between people.

Keywords: crypto currencies, financial mechanism, Blockchain technology

JEL classification: G23

Introduction

The economic and social crisis phenomena create the conditions for the birth and dissemination of new approach for circulation of goods and services and the related modality of exchange.

According to Mr. Geert Lovink, an opinion leader in the web culture of the economy and society, says that we are living in the age of "platform capitalism" dominated by cyber-colossus planetary coalition with high frequency finance and controlling together with almost all resources in play.

The marketing-oriented algorithm, is the monopolist stratagem, to control and exploit users.

Users are anesthetized by the neurotic consumption of information-rubbish on Social network to stop to pursue their own interest.

Results

The economic paradigm, based on the so-called startup system,that supports these mega-platforms, however, has failed. The start-up successful initiative are very few and are driven to ambiguous venture capital companies ending into join the commonly known Facebook and Google. One alternative to the said system is to generate DECENTRALISED economies.

The network economy must be managed openly by a 'third entity' - which we can call it 'microeconomics', 'crowd funding', 'commons economy', 'decentralized P2P network', 'public infrastructure'. It is therefore a question of creating free networks *'free platform societies'*, with economic architecture based on cooperation between people.

Figure 1 - Crowdfunding relation

Source: EUE

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The opinion that over the next few years the crypto currency and the re-established decentralized economy will become Mainstream is convincing more and more.

Examples of these decentralized economies are increasingly widespread both at the level of economic-business realities and at the level of personal individuals/citizens.

Crypto currencies help the decentralized economic system to create confidence and trust between members

The real challenge of digital coins is to prevent unauthorized copies.

The crypto currencies use two mechanisms to prevent it:

1) The first is that every transaction is entered in a public online register that save it in several copies in a way that it necessary to be compared before to be updated

This process prevent double spending, and avoid buying 2 different assets with the same crypto currency.

2) The second mechanism is to protect the registry with cryptography.

Each update brings together a range of new transactions and adds it to the existing log.

Doing this the procedure forecast to frozen and then encrypt the previous version of the log.

The new version of the log, is call ‘block’ and includes the encrypted copy of the previous log. Anyone can use this encrypted data to generate a number that controls the validity of the block.

Nevertheless, it is extremely difficult to generate this number on the computational level with the attempt to hack the system.

It's this feature, which makes the blocks easy to control but very difficult to copy, and that's what keeps the system safe.

Clearly, every time the log is updated, new blocks are continuously created with the result to produce an uninterrupted chain of blocks.

From here comes the term Blockchain technology.

Let's consider now a beautiful international region with the population that have access to rich natural resources but that suffer of low appreciation of their respective coins; The Balkan region fit as example.

Let do an example relating the networks that operate in this territory.

-A. Companies community network that aggregate goods and services and activate exchange

and

-B. Individuals community that aggregate goods and services and activate exchange.

Example A)

Companies community network that aggregate goods and services and activate exchange: the BexB Community bexb.it A1)

Example A1

The network consists of the composition of many companies and related business activities that gather together to secure a safe demand in addition to their normal market.

The network use a trade Platform that include the use of a complementary currency.

The network accepts the new members. After analyzing and evaluating (balance sheets, history and reliability) by an insurance company.

The value calculated by the insurance is then proposed as maximum value to be secured

Bexb can entrust to a new member a greater amount, depending on a new estimation made by the same network (BexB) based on the criteria of success that this new product's will have in the circuit.

BexB network provide then an initial credit in crypto currency to be spent on the internal circuit for a minimum value equal to the amount insured.

Example A)

Companies community network that aggregate goods and services and activate exchange: Wir Bank egA2)

Example A2

An analogous mechanism has been adopted by Wir Franc in the beginning of 20th century to face the great depression

Unlike other banks, WirBank delivers Wir currency credits, alongside normal Swiss francs credits.

Wir is the Complementary Coin that allows multilateral compensation of goods and services among the 60,000 business customers.

The principle to asset-backed the currency, through credit lines secured by members pledging assets is used also from other complementary currency.

In addition to EuroBexB (Italy) and Wir (Switzerland) see also :

- Ithaca Hours (U.S.A.);
- LETS (U.K.);
- RES (Belgium);
- Sardex (Sardegna, Italy);
- SCEC (Italy).

Example B)

But here we have talked about companies, that are income-generating subjects.

If we want to translate the concept to anon generating income subjects as simply persons/citizen, we should assume that the Network must be composed of (trustable people) members who offer to the others participants of the network 1-their time or 2- the use of their assets

To work the Person/citizen platform have to credit a sum (in crypto currency) that the members will spent in the circuit.

Example C)

The first question is what criteria are used to select trustable persons as participants and how evaluate their individual capacity to be sustainable?

The individual or person has the following resources:

1) has a job and annuity that is safe for their quality of life.

2) owns his free time and human and professional skills.

3) own non-interest bearing assets, ie without any income or even only costs.

Example D)

The first point is untouchable because describe essential activities for the quality of life of the person himself.

It remain the n2 and n3 are interesting,

1-the time offering professional and human services

and

2-the non productive assets, eg buildings, housing, etc.

Example E)

Let's imagine now that a group, community association in a region or territory characterised of person/citizens possessing enough time and professional and human capacities and non-profit assets decides to join in a network or a cooperation platform.

Now these resources can be made fruitful through their mobilization.

The initiation of such mobility can be made through the real evaluation of the individual potential activities of the person.

This evaluation can be performed by:

1) Out-of-the market insurance - See Bexb

or

2) by the same Network/Platform

The n2 option is particularly interesting if you consider that: a)

-being the assets of our members network grouped it result to be a new product “other than the single property asset eg apartment”

and…

…it could made it available/disposal for use (factual or administrative) for a Financial Fund in return for an annuity.

or for the issue of a Guarantee in favour of creating crypto currency credit needed to expand the network circuit above described.

Still for the n2 option is particularly interesting if you think of the following example: b)

-to include the idea in a long or short term project for the same beneficiaries.

In fact depending on

1-the market value of all the assets of the members (the new product)

and

2-the results of the business plan of the project…....

The financial market offer a product so called Bank Guarantee (BG) to be used as collateral for the creation of credit to be provided to participants and to make the crypto currency. (asset backed).

Example A and B)

Joining the network of companies and the individual networks would stimulate even more the creation of decentralized economies with sure sensible and measurable impact on the economy of the territory.

All provided that the mixed system created remains under the control of the managers / beneficiaries and the value of the created currency is assets / backed.

….and all that is even more interesting thinking that we are in the Balkans a beautiful and rich international territory with a creative population but with a low appreciation of coins.

Final Remarks

Crypto currencies help the decentralized economic system to create confidence and trust between members. The real challenge of digital coins is to prevent unauthorized copies.

The crypto currencies use two mechanisms to prevent it:

1) The first is that every transaction is entered in a public online register that save it in several copies in a way that it necessary to be compared before to be updated

This process prevent double spending, and avoid buying 2 different assets with the same crypto currency.

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Bibliography

Bradbury, D. (2013): Bitcoin's successors: from Litecoin to Freicoin and onwards. The Guardian. Guardian News and Media Limited

Brito, J. and Castillo, A. (2013): Bitcoin: A Primer for Policymakers (PDF). Mercatus Center. George Mason University

Borax, J. (27 July 2016): Best Forex Brokers That Offer Bitcoin (BTC/USD) Trading. FXdailyReport.Com

Clarke, D.; Mccorry, P.(2015): Bitcoin: Perils of an Unregulated Global P2P Currency: Computing Science. (Newcastle University, Computing Science, Technical Report Series, No. CS-TR-1470); coinmarketcap.com

Cyrus, F.(2016): Pissed-off customers sue GAW Miners in proposed class-action suit. Ars Technica

Dai, W. (1998): B-Money; When bitcoins go bad: 4 stories of fraud, hacking, and digital currencies. Washington Post

Green, M. (26 May 2013): Zerocoin: Anonymous Distributed E-Cash from Bitcoin (pdf). Johns Hopkins University

Ian, A. (2015): If Banks Want Benefits Of Blockchains, They Must Go Permission less. News BTC, 2015

Josiah, W. (2015): What is an Altcoin?, cryptocoinsnews.com

Greenberg, A. (2011): Crypto Currency, Forbes.com

Kristoufek, L. (2014): What are the main drivers of the Bitcoin price? Evidence from wavelet coherence analysis. p. 1 Section 1 Introduction, (the) success has ignited an exposition of new alternative crypto-currencies

Mitsuru, I., Yukinobu, K. and Tsutomu, M. (2014): Is Bitcoin the Only Crypto currency in the Town? Economics of Cryptocurrency And Friedrich A. Hayek

McDonnell, P., (2015): What Is The Difference Between Bitcoin, Forex, and Gold. NewsBTC

Morris, D. (2013): Beyond bitcoin: Inside the cryptocurrency ecosystem. CNNMoney, a service of CNN, Fortune & Money. Cable News Network

Perez, E. (2015): CNN Justice Reporter. CNN

Reza, R. (2015): The Silk Road, Bitcoins and the Global Prohibition Regime on the International Trade in Illicit Drugs: Can this Storm Be Weathered?. Glendon Journal of International Studies / Revue d'études internationales de Glendon. 8 (1-2). ISSN 2291-3920

Trimborn, S. (2016): Wolfgang Karl Härdle. CRIX or evaluating blockchain based currencies, ISSN 1860-5664, SFB 649 Discussion Paper 2016

Tasca, P. (2015): Digital Currencies: Principles, Trends, Opportunities, and Risks. Social Science Research Network. SSRN 2657598;

* * *, A crypto-currency primer: Bitcoin vs. Litecoin. ZDNet. 14 December 2013

* * *, CryptoCoinTalk.com - Discussing the World of Cryptocurrencies. CryptoCoinTalk

* * *, Cryptocurrency and Global Financial Security Panel at Georgetown Diplomacy Conf, MeetUp, 11 April 2014

* * *, Crypto-Currency Market Capitalizations. Decentralized currencies impact on central banks, News, 3 April 2014

* * *, Dogecoin Community Raising $30,000 for Children's Charity, International Business Times, 4 February 2014

* * *, Experiments in Cryptocurrency Sustainability, Let's Talk Bitcoin, March 2014

* * *, First U.S. Bitcoin ATMs to open soon in Seattle, Austin, Reuters, 18 February 2014

* * *, Fundamental Analysis for Cryptocurrency, Wall Street Crypto, 10 January 2014

* * *, How Bitcoin Compares to Fiat Currency's House of Cards. Bitcoin Magazine

* * *, How Cryptocurrencies Could Upend Banks' Monetary Role, American Banker, 26 May 2013

* * *, How to Write and Format an Article for Ledger (PDF). Ledger. 2015. doi:10.5195/LEDGER.2015.1

* * *, Infringement of Kayne West Mark and Other Violations, Pryor Cashman LLP, 6 January 2014

* * *, Introducing Ledger, the First Bitcoin-Only Academic Journal. Motherboard. Mt. Gox Seeks Bankruptcy After $480 Million Bitcoin Loss, Carter Dougherty and Grace Huang, Bloomberg News, Feb. 28, 2014

* * *, On the Complexity and Behaviour of Cryptocurrencies Compared to Other Markets, 7 November 2014;

* * *, The Big Picture Behind the News of China's Bitcoin Bans – Bitcoin Magazine. Bitcoin Magazine

* * *, The FBI's Plan for the Millions worth Of Bitcoins Seized From Silk Road, Forbes, 4 October 2013

* * *, The Future of Cryptocurrency, Investopedia, 10 September 2013

* * *, This is Huge: Gold 2.0 - Can code and competition build a better Bitcoin?, New Bitcoin World, 26 May 2013

* * *, Tracking the Intangible: How Fraud Examiners Are Busting Bitcoin Fraud

* * *, UK launches initiative to explore potential of virtual currencies. The UK News

* * *, Want to make money off Bitcoin mining? Hint: Don't mine, The Week, 15 April 2013

* * *, Wary of Bitcoin? A guide to some other cryptocurrencies, 26-05-2013

* * *, Zerocoin- Add-on For Bitcoin Could Make It Truly Anonymous And Untraceable, Forbes, 26 May 2013;

CENTRAL BANKS AND FINANCIAL MARKETS. ADJUSTMENTS TO A NEW REALITY

Iulia LUPU[89], PhD

Abstract

Following the recent financial turmoil, the theories and paradigms based on the efficiency and capacity of self-regulation of markets, have been much discussed. In the new created context, economies depend on central banks that by their power to print money provide a quick response to crises. Increasing dominance of the monetary policy and the transformation of more and more central banks into institutions with very wide scope open new debates on the authority, prudence and independence of central banks. Monetary policy has supported the financial markets for the past 8-9 years, but the direction has gradually begun to change. However, there are different trends and actions at the level of the globally representative central banks. Financial markets have become more and more dependent on central bank support, and their room for manoeuvre has diminished. Continuing this situation as public confidence in central banks is called into question may have serious consequences for the financial markets and the economy in general.

Keywords: central banks, financial markets, monetary policy

JEL classification: E52, E58, G19

Introduction

Following the recent financial turmoil, the theories and paradigms based on the efficiency and capacity of self-regulation of markets, that have influenced economic developments so far, have been discussed. The economic, financial, and political global context is in a continuous change, some adjustments are short-lived and others are noticeable after more time. The recent evolution of the global economy is a reflection of changes in production, commerce or the financial sector, and the understanding of certain economic relationships is becoming more and more difficult. Increasing financial integration has augmented the influence of the exchange rates of the major currencies used for financing on global financial conditions, with significant effects especially on emerging markets.

New debates arise in the economic literature regarding the link between financial structure and economic growth, reiterating that "too much" funding can damage sound economic growth or that permanent innovation of forms and funding instruments can change the financial structure. At the same time, the challenge for regulators and supervisors is to contribute to sound risk management and at the same time allow for the emergence of favourable innovations for the economy and society.

In the new created context, economies depend on central banks that by their power to print money provide a quick response to crises. Increasing the dominance of monetary policy and the transformation of more and more central banks into institutions with very wide scope open new debates on the authority, prudence and independence of central banks.

Characteristics of the New Economic and Financial Conditions at Global Level

Among the main features of the new global economic and financial conditions is a larger global debt ratio compared with the value recorded before the financial crisis in 2007 (Figure 1).

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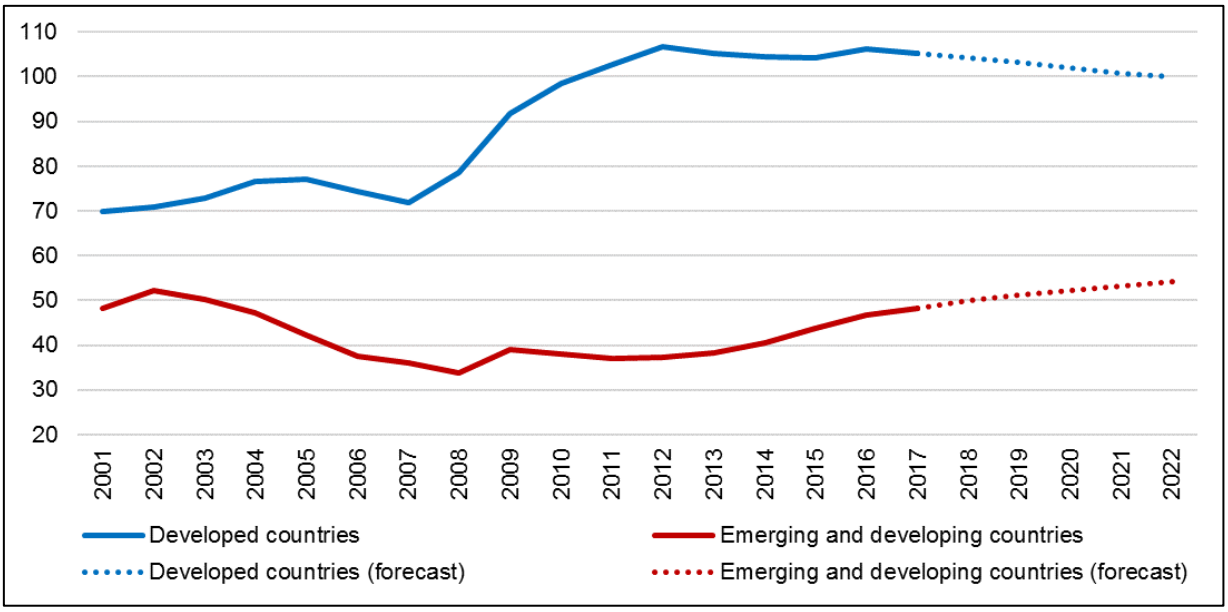
Figure 1 – Evolution of global debt as a share of GDP (2001 –2022)



Source: Author's processing using IMF statistical data (2017)

However, there is a difference between developed countries[90] , where the growth rate was much faster, and emerging and developing countries, the gap between the two categories of countries rising until 2012, after which it was maintained or even started to decrease slightly.

Moreover, the International Monetary Fund (IMF) forecast for the next five years shows a slight fall in debt-to-GDP ratios for developed countries, which will reach 99.9% of GDP in 2022 and an increase in the debt ratio in GDP for emerging and developing countries, with an estimated value of 54.1% in 2022.

The United States of America (US) has the largest government debt measured as a share of global debt (31.8%), followed by Japan with a share of 18.8%, China (7.9%), Italy , 9%) and France (3.8%) (details in table 1).

Although it holds a significant share of the global debt, China has a reduced debt share in national GDP compared to most countries in the world, currently only 47.6%. The other four countries have a government debt over (or very close to, in the case of France) the national GDP.

Together, these countries hold over 66% of the global public debt. According to estimates, private debt is still significantly below government debt, accounting for only two-thirds of it in 2015.

Table 1

Ranking of the world's first countries according to the debt ratio in global debt

Position	Country	Debt ($ billions)	Debt (% of global debt)	Debt (% of national GDP)
1	US	19.947	31.8%	108.1%
2	Japan	11.813	18.8%	240.3%
3	China	4976	7.9%	47.6%
4	Italy	2454	3.9%	133.0%
5	France	2375	3.8%	96.8%

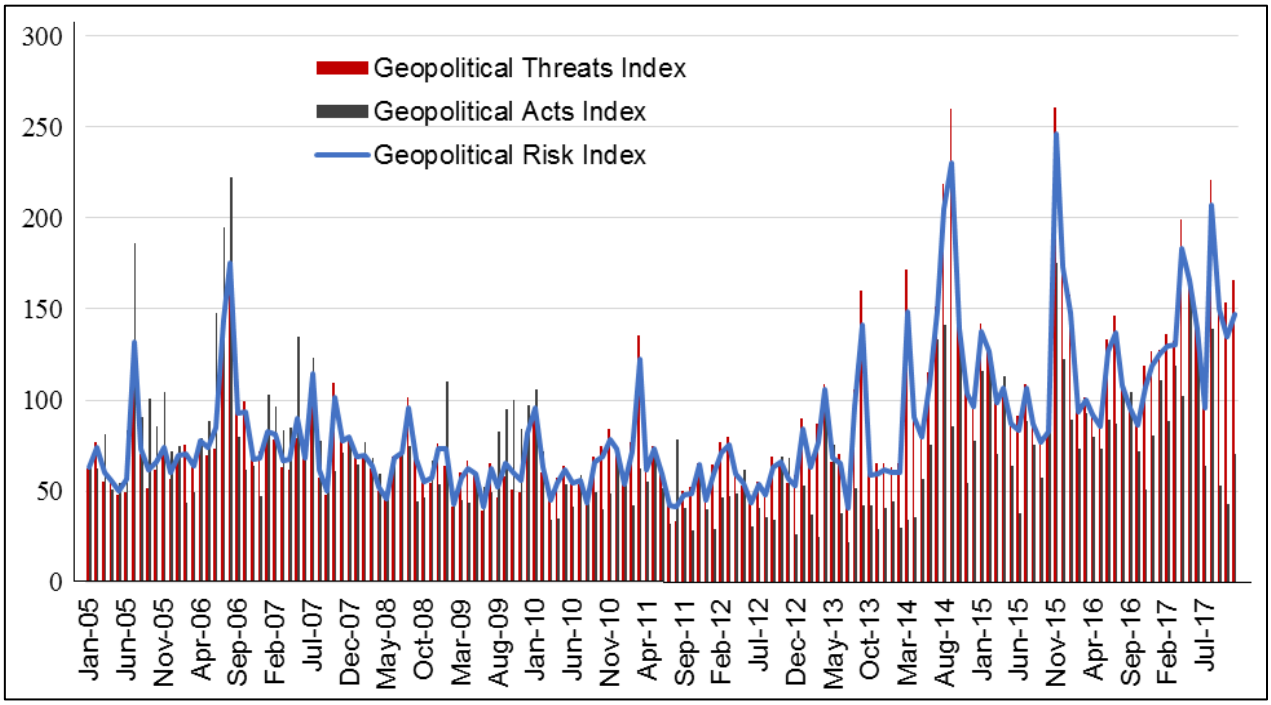
Source: Visual capitalist and IMF (2017)

[90] *Government debt has increased substantially in developed countries (on average by 22.2% between 2008 and 2011). In some countries (Greece, Portugal, Spain, Japan, Slovenia, Ireland), government debt as a share of GDP increased by over 50% between 2006 and 2016. Germany is the only G7 country in which public debt is currently 65% of GDP, below the level registered in 2006 (67%). There is also a group of countries in which the share of government debt in GDP declined over the same period (Norway, Israel, Turkey, Saudi Arabia, Indonesia, India, Argentina, Switzerland and Sweden), but the decrease is much lower compared to the increase in the other countries (the largest decrease in Norway, - 19.1%).*

The presence of very low interest rates has made lending possible, but has encouraged companies and consumers to accumulate even more debt. The Bank of International Settlements (2017) Annual Report highlighted increased credit risk in several emerging countries but also in smaller developed countries as well as a possible resurgence of trade protectionism that could weaken the strength of the global economy.

At international level, efforts are being made to preserve regulatory reforms in recent years, while increasing political uncertainty in developed countries has increased the volatility and unpredictability of the macroeconomic environment. Geopoliticalrisk indexes[91] (the Geopolitical Risk Index, the Geopolitical Threats Index and the Geopolitical Acts Index, whose evolution is presented in Figure 2), which measured geopolitical risks, had low values and low fluctuations during the crisis and began to increase and record very high fluctuations in the post-crisis period, remaining very high towards the end of 2017.

Figure 2 – Evolution of the geopolitical risk index (January 2005 - November 2017)

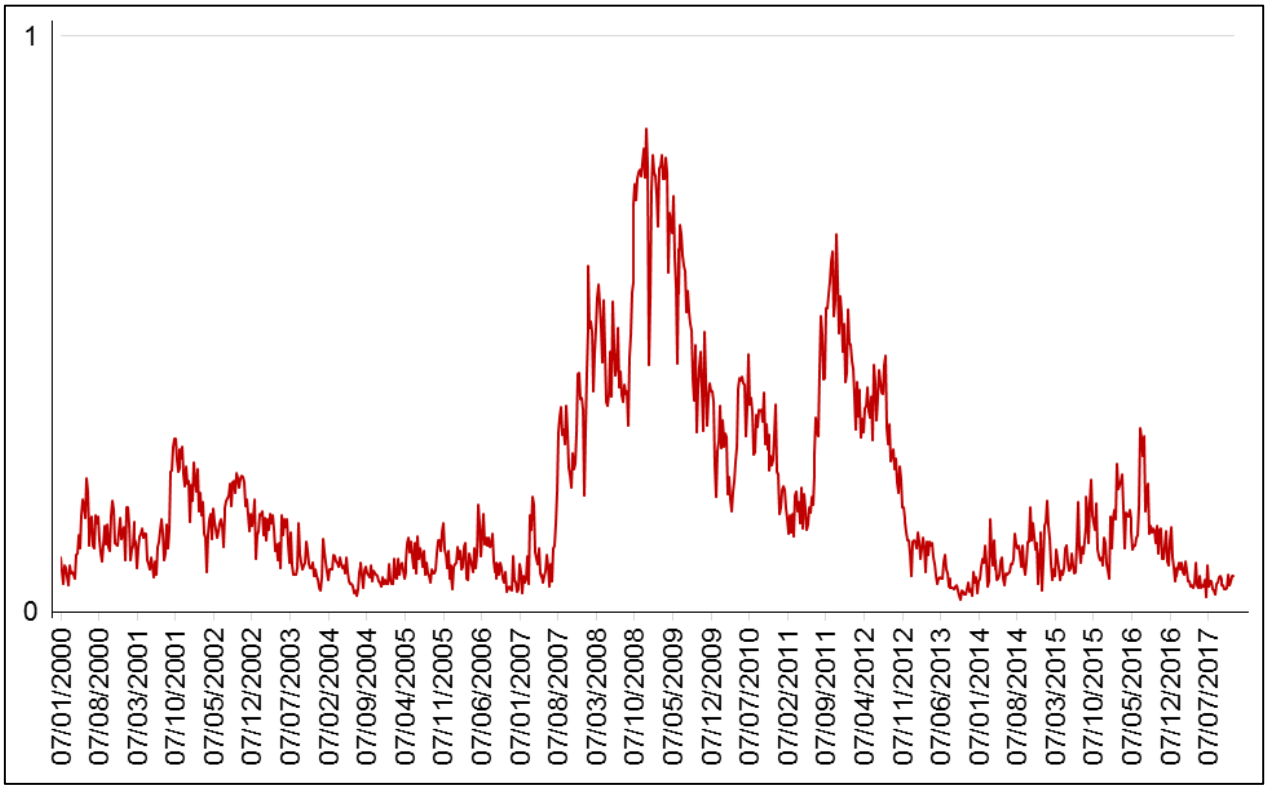


Source: Author's processing using data from Caldara and Jacobiello (2017)

If global geopolitical risk index values are rising after 2012, the composite index for systemic risks calculated by the European Central Bank (ECB) for the euro area (Composite Indicator of Systemic Stress, CISS) is considerably smaller in the same period, reaching minimum values in 2017 (Figure 3). This index includes several indicators specific to different sectors of the financial system (equity and bond markets, foreign exchange markets and money markets, etc.) and is built to show the extent to which systemic financial stress contributes to financial instability (Hollo et al. 2012). The value of this indicator may be between 0 and 1, higher values representing periods of major financial difficulties.

[91] *An example of such an index is that calculated by Caldara and Jacobiello (2017) who developed a monthly index (the geopolitical risk index) based on the inventory of the words on geopolitical tensions in the main international newspapers organized in six groups. Thus, Group 1 contains words associated with precise references to geopolitical risk and military tensions involving large regions in the world. Group 2 encompasses words about nuclear tensions, and groups 3 and 4 include words about war threats and terrorist threats. Unlike the previous groups where the risks were recorded, the last two groups (5 and 6) contain words that appear in the press of current unfavourable geopolitical events that could lead to the rise of geopolitical uncertainty (like terrorist acts or the onset of a war). Geopolitical Risk Index refers to all groups of words, groups 1-4 refers to Geopolitical Threat Index, and groups 5 and 6 appertain to Geopolitical Acts Index.*

Figure 3 – Evolution of the composite index for systemic risks calculated by the European Central Bank for the euro area (CISS, January 2000 - November 2017)



Source: ECB (2017)

Monetary policy has supported the financial markets for the past 8-9 years, but the direction has gradually begun to change. However, there are different trends and actions at the level of the main central banks (Fed, European Central Bank, Bank of England, and Bank of Japan).

As a result of these actions, Morgan Stanley, by calculating and publishing the correlation index of financial assets, estimated a sharp fall in the correlation between different financial markets (index evolution is shown in Figure 4). This correlation index of Morgan Stanley's financial assets is a measure of how financial asset prices evolve in a similar way, both in terms of financial assets - shares, bonds, and regions of the world. The lack of a correlation between the prices of financial assets is important for investors who try to avoid the simultaneous fall of prices of all assets in the portfolio, aiming at compensating loss through gains elsewhere.

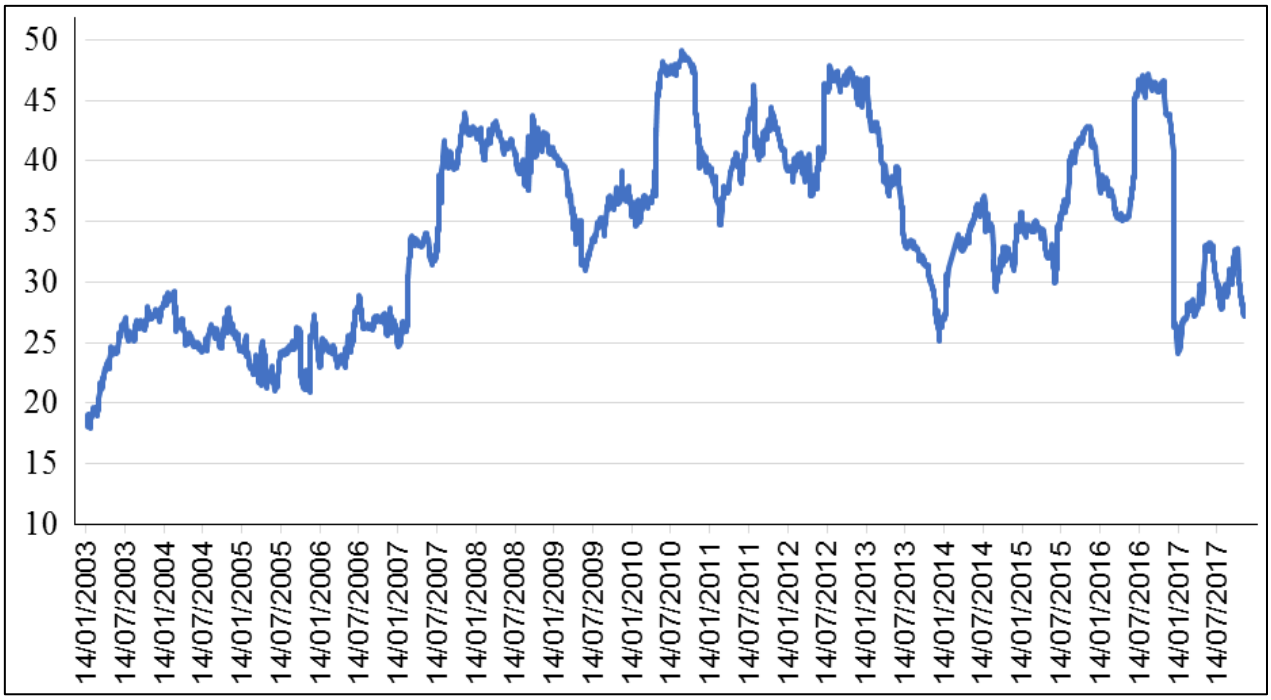
According to recent data, this correlation reached the level recorded in early 2007, in the early stages of the financial crisis that followed. At that point, the correlation in the financial markets increased sharply, then fluctuated in a high-value range until 2012-2013 when it declined steadily (the Fed has made it clear that it uses quantitative easing policies).

In 2014 and 2015, a rebound in economic growth was seen against the backdrop of the rise in oil prices and the difficult situation in China's hard-landing economy, and global financial conditions tightened. Increasing the correlation between financial assets in this period has led to doubts about the self-sustainability of the global economy. In 2016, this index of global financial asset correlation declined again as a result of Republican election winning in the US; although the economy was growing, there were doubts about its sustainability.

In January 2017, this index fell steeply, reaching a minimum of the past 11 years, highlighting the emergence of divergences in central bank shares and an increase in geopolitical risk.

Morgan Stanley identifies another factor that has led to significant changes in the evolution of correlation (from very high values in September-December 2016, to very low values in January-February 2017), namely increasing confidence in a global economic recovery reduces the chances that markets will be panic at the same time.

Figure 4 – Global correlation of financial assets (January 2003 - November 2017)



Source: Bloomberg, Morgan Stanley Research, Global Correlation Index

According to the Morgan Stanley researchers, such a sharp drop in correlations usually occurs in the final phase of an economic cycle. In the current context, asset prices are more influenced by their specific events and less general concerns about the economic downturn, factors that influence the market during this period vary and the links between different financial assets are no longer preserved.

Conclusions

The global financial crisis has triggered many changes in economic and financial policies, increasing the focus on objectives, instruments, policies, and alternative tasks for the major central banks in the world.

Financial markets have become more and more dependent on central bank support, and their room for maneuver has diminished. Continuing this situation, as public confidence in central banks is called into question, may have serious consequences for the financial markets and the economy in general.

Central banks have given full attention to the risks to financial stability by addressing this issue through new, often centralized, central bank approaches. The monetary easing policy may come at the cost of financial instability, while a stricter monetary policy could bring production losses, higher unemployment, and a failure to meet the inflation target, and the assessment of the appropriate monetary policy stance must take into account these compromises.

The results of recent academic research suggest that high increases in short-term interest rates for reasons of maintaining financial stability imply costs that can well outweigh the benefits, with interest rates being too rudimentary to deal with financial stability concerns.

In a complex economic context, instruments that are more suited to meeting the central bank's prerogatives to prevent threats to financial stability seem to be regulation, supervision and macro-prudential policy, including for example, stress tests or increasing capital requirements. Without being perfectly suited, these instruments do not carry risks to production or unemployment, as is the case for unconventional monetary policies.

Bibliography

Caldara D., Iacoviello M. (2017), Measuring Geopolitical Risk, working paper, Board of Governors of the Federal Reserve Board, November.

Hollo D., Kremer M., Lo Duca, M. (2012), CISS – a composite indicator of systemic stress in the financial system, Working Paper Series, Nr. 1426, BCE, March.

* * *, Banca Reglementelor Internaționale (2017), 87th Annual Report 1 April 2016–31 March 2017, Basel, 25 June.

* * *, Fondul Monetar Internaţional (2017), World Economic Outlook, October.

Electronic resources:

www.ecb.europa.eu

www.eiopa.europa.eu

www.esma.europa.eu

www.esrb.europa.eu

www.moodysanalytics.com

www.moodys.com

www.morganstanley.com

www.visualcapitalist.com

www.bloomberg.com

EUROPEAN POLICY ON INCREASING THE COMPETITIVENESS OF THE FINANCIAL INDUSTRY, A KEY FACTOR FOR JOB CREATION

Otilia Elena MANTA[92], PhD(c)

Abstract

More and more in the field of research are papers on the relationship between competitiveness, job creation and sustainability. This is also in line with the Global Economic Forum's Global Competitiveness Report 2017-2018, a report that appears at a time when the global economy is facing big challenges and "has begun to show signs of recovery and yet the factors decision makers and business leaders are concerned about prospects for future economic growth. Governments, businesses and individuals face a high level of uncertainty as technological and geopolitical forces reshape the economic and political order that has sustained international relations and economic policy over the past 25 years. At the same time, the perception that current economic approaches do not serve people and societies sufficiently well gains ground, triggering appeals for new models of human economic progress. “Moreover, in sectors such as the agro-food industry, the phenomenon of increased competitiveness is growing, economies such as the national economy being subject to competitiveness mechanisms with a direct impact on the external balance of payments. In many advanced economies, the big challenges are due to the increasing inequalities between resource-poor and the impacts of technological change and climate change on the economy, "the complex impact of globalization - including those related to commodity trade, services and data, and the movement of people and capital. In emerging economies, the sharp decline in poverty and an increase in the middle class have fuelled higher aspirations and demands for better public goods; these requirements are now facing a slower growth and a tightening of government budgets. "

Key words: competitiveness of the financial industry, jobs, financial technology

JEL classification: G23, O16

Introduction

Globalization is a phenomenon that is intensifying globally, especially in the economic, technological and social fields (business development and job creation), being affected by many factors directly affecting both the phenomenon and each national economy in its specificity. Globalization as a topic is debated at the scientific level at both academic and higher decision levels. The process of globalization is directly related to current global concepts such as migration, interstate trade development, new financial technologies, and so on.

The phenomenon of globalization is also influenced by the numerous crises that have occurred in the past 10 years, and the one that had the biggest impact on world economies was the global financial crisis. At present, the world economy as a result of GDP growth accelerating to 3.5% in 2017 and nationwide to more than 5.7% shows signs of recovery, but with elements that can ever influence this growth. As a result of this positive development, we are witnessing ever more questionable economic policy decisions at the global level, namely deepening policies between those who have resources (rich) and those in need (poor), and the uneven distribution of the benefits of economic progress, even if there is economic growth, of the generations' present divisions with an impact on future generations, the inequality of global income with a direct impact on major distribution in advanced economies and the negative impact on the environment. In order for this economic growth to have a positive impact on all social classes, our great challenge to economics researchers is to develop economic models that respond to this state of affairs and reduce major technological dysfunctions in the economic and political order overall. Globalization adds a greater uncertainty about the types of policies that will make savings not show the future.

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Together, all these factors cause decision-makers to find new approaches and policies for advancing economic progress.

Methodology of Scientific Research

In order to substantiate the research of comatose in the context of globalization, we have used observation and examination tools, research methods based on the basic principles of scientific research, and we have also created procedures based on factual analysis, following a significant practical experience and intensive documentation at the level of domestic and international literature with direct analysis of the global competitiveness index and other indicators with a direct impact on competitiveness at national, European and international level.

Research Results

The growing consensus is that economic growth must again focus more on human well-being. Such human economic progress is multidimensional in nature - it is broadly based on the fact that the vast majority of people benefit ecologically and fairly in terms of creating opportunities for all and not disadvantaging future generations. In this new context, competitiveness remains an important contribution to the broader goal of human economic progress by creating the resources needed to increase welfare, including better education, health and safety and a higher per capita income .

The Global Competitiveness Report (GCI), which tracks the performance of nearly 140 countries on 12 pillars of competitiveness, is presented in the Global Competitiveness Report 2017-2018. It assesses the factors and institutions identified by empirical and theoretical research to determine productivity improvements, which in turn are the main determinants of long-term growth and an essential factor in economic growth and prosperity. In this paper, we have selected relevant information from the Global Competitiveness Report, which aims to help policy makers understand the complex and multifaceted nature of the development challenge; to develop better policies based on public-private collaboration; and take steps to restore confidence in the possibilities for further economic progress.

Improving the competitiveness drivers identified in the 12 pillars of the GCI requires the coordinated action of the state, the business community and civil society. All actors in the society must be engaged to make progress alongside all the competitiveness factors, which is necessary to achieve long-term results. This year, GCI highlights three main challenges and lessons that are relevant to economic progress, public-private collaboration and political action: firstly, financial vulnerabilities pose a threat to competitiveness and the ability of economies to finance innovation and technological adoption; secondly, emerging economies are becoming better at innovation, but more can be done to spread the benefits; thirdly, labour market flexibility and workers' protection are necessary for common competitiveness and prosperity in the context of the fourth industrial revolution.

The report begins by establishing the current landscape of economic progress and key future challenges. Global Competitiveness Index 2017-2018, ranking 137 economies, Global Competitiveness Index 2017-2018 measures national competitiveness - defined as a set of institutions, policies and factors that determine productivity levels.

Table 1

Global Competitiveness Index 2017-2018

	Economy	Score[1]	Prev.[2]	Trend[3]
1	Switzerland	5.86	1	
2	United States	5.85	3	
3	Singapore	5.71	2	
4	Netherlands	5.66	4	
5	Germany	5.65	5	
6	Hong Kong SAR	5.53	9	
7	Sweden	5.52	6	
8	United Kingdom	5.51	7	
9	Japan	5.49	8	
10	Finland	5.49	10	
11	Norway	5.40	11	
12	Denmark	5.39	12	
13	New Zealand	5.37	13	
14	Canada	5.35	15	
15	Taiwan, China	5.33	14	
16	Israel	5.31	24	
17	United Arab Emirates	5.30	16	
18	Austria	5.25	19	
19	Luxembourg	5.23	20	
20	Belgium	5.23	17	
21	Australia	5.19	22	
22	France	5.18	21	
23	Malaysia	5.17	25	
24	Ireland	5.16	23	
25	Qatar	5.11	18	
26	Korea, Rep.	5.07	26	
27	China	5.00	28	
28	Iceland	4.99	27	
29	Estonia	4.85	30	
30	Saudi Arabia	4.83	29	
31	Czech Republic	4.77	31	
32	Thailand	4.72	34	
33	Chile	4.71	33	
34	Spain	4.70	32	
35	Azerbaijan	4.69	37	
36	Indonesia	4.68	41	
37	Malta	4.65	40	
38	Russian Federation	4.64	43	
39	Poland	4.59	36	
40	India	4.59	39	
41	Lithuania	4.58	35	
42	Portugal	4.57	46	
43	Italy	4.54	44	
44	Bahrain	4.54	48	
45	Mauritius	4.52	45	
46	Brunei Darussalam	4.52	58	
47	Costa Rica	4.50	54	
48	Slovenia	4.48	56	
49	Bulgaria	4.46	50	
50	Panama	4.44	42	
51	Mexico	4.44	51	
52	Kuwait	4.43	38	
53	Turkey	4.42	55	
54	Latvia	4.40	49	
55	Viet Nam	4.36	60	
56	Philippines	4.35	57	
57	Kazakhstan	4.35	53	
58	Rwanda	4.35	52	
59	Slovak Republic	4.33	65	
60	Hungary	4.33	69	
61	South Africa	4.32	47	
62	Oman	4.31	66	
63	Botswana	4.30	64	
64	Cyprus	4.30	83	
65	Jordan	4.30	63	
66	Colombia	4.29	61	
67	Georgia	4.28	59	
68	Romania	4.28	62	
69	Iran, Islamic Rep.	4.27	76	
70	Jamaica	4.25	75	
71	Morocco	4.24	70	
72	Peru	4.22	67	
73	Armenia	4.19	79	
74	Croatia	4.19	74	
75	Albania	4.18	80	
76	Uruguay	4.15	73	
77	Montenegro	4.15	82	
78	Serbia	4.14	90	
79	Tajikistan	4.14	77	
80	Brazil	4.14	81	
81	Ukraine	4.11	85	
82	Bhutan	4.10	97	
83	Trinidad and Tobago	4.09	94	
84	Guatemala	4.08	78	
85	Sri Lanka	4.08	71	
86	Algeria	4.07	87	
87	Greece	4.02	86	
88	Nepal	4.02	98	
89	Moldova	3.99	100	
90	Namibia	3.99	84	
91	Kenya	3.98	96	
92	Argentina	3.95	104	
93	Nicaragua	3.95	103	
94	Cambodia	3.93	89	
95	Tunisia	3.93	95	
96	Honduras	3.92	88	
97	Ecuador	3.91	91	
98	Lao PDR	3.91	93	
99	Bangladesh	3.91	106	
100	Egypt	3.90	115	
101	Mongolia	3.90	102	
102	Kyrgyz Republic	3.90	111	
103	Bosnia and Herzegovina	3.87	107	
104	Dominican Republic	3.87	92	
105	Lebanon	3.84	101	
106	Senegal	3.81	112	
107	Seychelles	3.80	n/a	
108	Ethiopia	3.78	109	
109	El Salvador	3.77	105	
110	Cape Verde	3.76	110	
111	Ghana	3.72	114	
112	Paraguay	3.71	117	
113	Tanzania	3.71	116	
114	Uganda	3.70	113	
115	Pakistan	3.67	122	
116	Cameroon	3.65	119	
117	Gambia, The	3.61	123	
118	Zambia	3.52	118	
119	Guinea	3.47	n/a	
120	Benin	3.47	124	
121	Madagascar	3.40	128	
122	Swaziland	3.35	n/a	
123	Mali	3.33	125	
124	Zimbabwe	3.32	126	
125	Nigeria	3.30	127	
126	Congo, Democratic Rep.	3.27	129	
127	Venezuela	3.23	130	
128	Haiti	3.22	n/a	
129	Burundi	3.21	135	
130	Sierra Leone	3.20	132	
131	Lesotho	3.20	120	
132	Malawi	3.11	134	
133	Mauritania	3.09	137	
134	Liberia	3.08	131	
135	Chad	2.99	136	
136	Mozambique	2.89	133	
137	Yemen	2.87	138	

East Asia and Pacific · Eurasia · Europe and North America · Latin America and the Caribbean · Middle East and North Africa · South Asia · Sub-Saharan Africa

Note: The Global Competitiveness Index captures the determinants of long-term growth. Recent developments are reflected only in so far as they have an impact on data measuring these determinants. Results should be interpreted in this context.

1 Scale ranges from 1 to 7.

2 2016-2017 rank out of 138 economies.

3 Evolution in percentile rank since 2007 or earliest edition available.

Source: The Global Competitiveness Report 2017-2018

The *Global Competitiveness Index* has measured the factors that drive long-term growth and prosperity for more than four decades, helping policy-makers identify the challenges that need to be addressed and the strengths to build on their country's economic growth strategies. While the notion of competitiveness and the economic environment in which economic and investment policy decisions have evolved continuously, the last decade has seen an increase in significant changes that fundamentally transform the context in which policy decisions are made to stimulate growth economic.

After a long period of low growth as a result of the global financial crisis, the world economy seems to have brought pace.1 this is welcome news. However, despite this gradual improvement, decision-makers in many countries are concerned about the prospects for long-term economic development. This is partly due to the fact that the current expansion seems to be cyclical, supported by very low interest rates, rather than by the fundamental factors of structural growth. Productivity improvements seem to be slow and are not expected to return to the levels experienced over the past decades.

In a similar challenge, dominant growth strategies and economic growth patterns are increasingly under question. In advanced economies, distribution issues have shifted to the forefront, occasionally with political consequences. In emerging markets, such a query could be fuelled by the unfulfilled aspirations of an extended middle class.

The evolution of the world economy has been largely motivated and justified by the enormous contribution to economic growth in the last decades. To the extent that large-scale social inclusion has been taken into account in this process, it was primarily limited to an ex-post redistribution of any economic gains. With the global evolutionary political context and the emergence of the fourth industrial revolution, this approach will have to change - not only to make globalization work for more people than it has benefited so far, but also to ensure globalization has a large constituency to allow it to continue to lead economic growth in the first place. We need to change the debate and interventions in the field of economic policy in order to unlock productivity and to offer widespread prosperity by simultaneously solving economic growth and social inclusion before doing so, not afterwards. This has to happen even if it results in a substantially modified form of globalization with a potentially damp growth but with more buy-in and inclusion. To succeed, we also need to establish modern venues and deliberations about the impact of future policy efforts that include a larger set of stakeholders than is currently playing a role in driving change.

Four interdependent themes have been identified within the World Economic Forum on Economic Progress:

1. Transforming globalization into globalization, including proposals for improving qualifications, retraining and eliminating jobs; taxing, social protection and addressing inequalities; financial markets that work for everyone; competition and avoidance of capture; and encouraging a new era of international cooperation.

2. Destruction of productivity and economic potential in the context of the Fourth Industrial Revolution, which fundamentally changes constructions and limits productivity growth and raises questions about the future potential for improving welfare and how to capture and share the best rewards for new efficiencies, especially in light of the evolving nature of jobs and jobs.

3. Promote and achieve multidimensional inclusion, in particular through the development of a multidimensional instrument, which is informed through aggregated indicators of inclusive growth and welfare and can be used to assess the extent to which countries and communities are inclusive at the household.

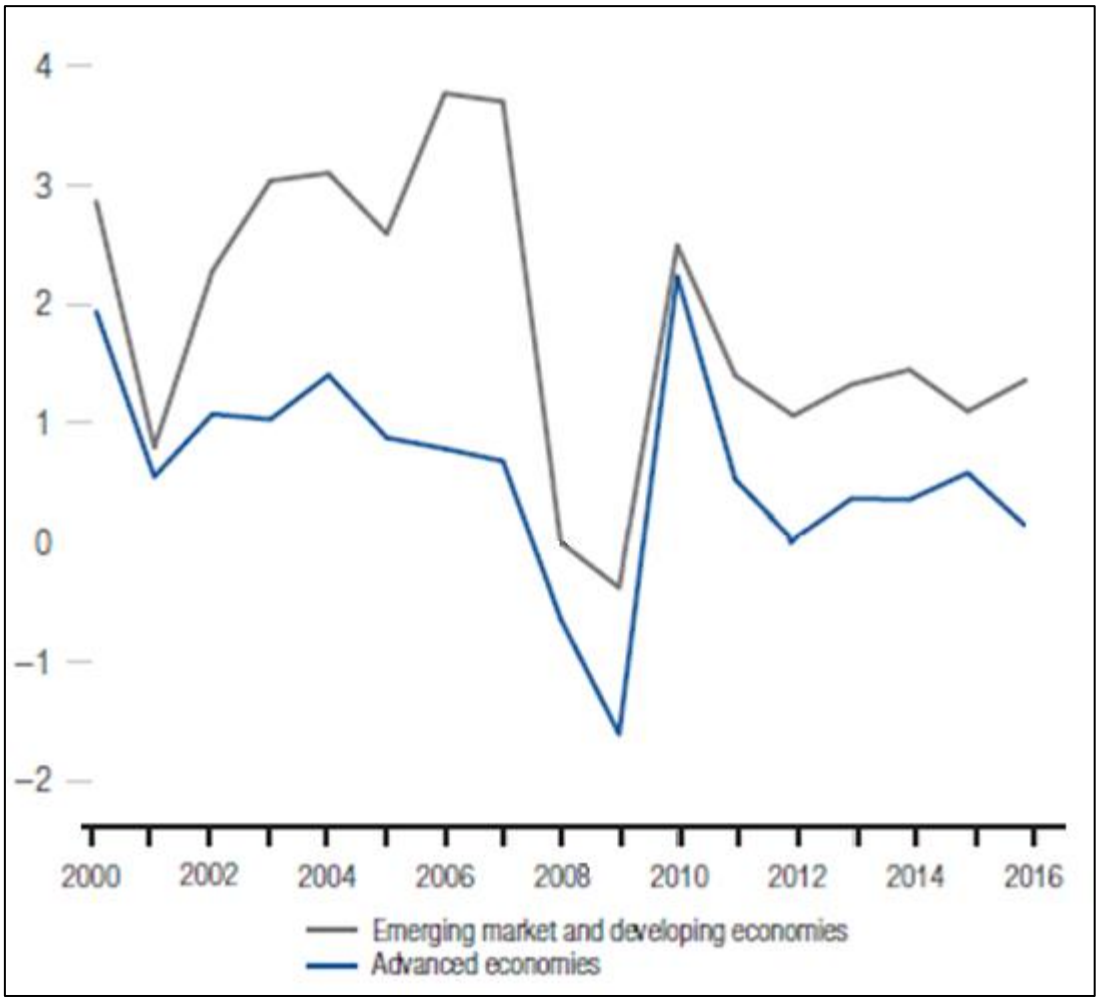
4. Develop communications, connectivity, and organizations to incorporate new developments into social media, counteract echo chambers that reinforce and increase polarization of ideas, thus expanding the set of channels and messages that resonate with people whose lives are affected, relying on commitments and ensuring the buy-in for choosing a solid policy.

According to Ms Diana Farrell, Co-Chairman of the World Economic Forum World Council "An additional explanation behind the slowdown in productivity is that traditional GDP measurement is not a big part of the value created in recent years. Recently, the share of goods and services offered to consumers without direct costs increases. For example, web-based search engines or online information or value created through social media channels are not valued at the value they

create for the consumer, but in the amount of advertising they generate for the companies that manage these services. Moreover, as technological progress is accelerating, we fail to take proper account of integrated product quality improvements - such as smartphones. Ultimately, services are inherently more difficult to measure than goods physical, and the share of services in the economy has been rising. Given that total factor productivity is calculated on the basis of GDP data, resulting measurement errors could lead to an underestimation of productivity growth. With these multiple sources of measurement uncertainty, the error of productivity measures could be substantial. "

Reinvigorating growth in a sustainable way will require reforms to strengthen human and physical capital and exploit new technologies. A possible contribution to recent declines in aggregate productivity was a reallocation of resources to less productive sectors; to reverse this trend, decision-makers need to eliminate the rigidities of regulation that hinder structural adjustments. Recent evidence also shows a dispersion of high productivity across enterprises across industries, including border technologies and older technologies; policies and institutions that help businesses in transition to more productive areas will also generate growth.

Figure 1 – Total factors productivity 2000 – 2016 PPP, GDP weighted



Source: IMF 2017

The rhythm and the disruption of technological change create unprecedented opportunities and challenges to be amplified by the convergence of digital, physical and biological technologies that characterize the industrial revolution.

These emerging technologies have a tremendous potential to be a source of growth, but their future evolution is uncertain. An essential challenge is how to unlock their potential in a way that benefits society as a whole, given that they can profoundly restructure the national and global distributions of incomes and opportunities and can lead to significant structural changes. The effects of future technologies are unknown, but political challenges related to current technologies illustrate the magnitude of change. Job losses are expected because technology transforms production and services over the coming years, raising questions about how quickly new jobs will

be created and the future of economic development models based on the export of labour-intensive products. At the same time, technological advances create significant value for consumers, more than is currently reflected in national statistics.

The technological frontier expands rapidly, with recent advances in artificial intelligence of self-learning, powered by the increase in the amount of data generated by mobile phones and sensors on machines and equipment. Small and remote players can disrupt the status quo, increasingly interconnectedness.

Efficient markets and macroeconomic stability is the key of the economic growth. But how well the growth of society as a whole depends on the framework of rules, incentives and institutional capacities that shape the quality and equity of human capital formation: the level and patience of the real economy, the pace and scale of innovation, the efficiency and flexibility of worker protection, the coverage and suitability of the social security, quality and quality the breadth of access to infrastructure and basic services, probable business and political ethics, and the breadth and depth of households' household management.

The Competitiveness Agenda at the heart of the Global Competitiveness Index (GCI) is an important starting point and not only because productivity and long-term growth generate resources for wider society goals. The Agenda for Competitiveness, as part of the wider economic development agenda, has an intrinsic and instrumental value for human development and well-being: for example, health and education are among the 12 pillars of the ICC.

In Economic and Budgetary Outlook for the European Union 2018 published on January 15, 2018 was publishing the indicators which have direct influence to the competitiveness economies in Europe. In 2017, the EU and euro-area economies continued their moderate growth (slightly over 2 %) in a context of global improvement (3.5 %) underpinned by a strong rebound in world trade, continuing growth in China and a return to growth in countries such as Brazil and Russia. This growth, which should continue in the next two years, was shared by all euro-area Member States for the first time since the crisis, and was accompanied by the creation of jobs – unemployment is at a post-crisis low – and strong investment, which reached pre-crisis levels.

With regard to public finances, the general government deficit for both the EU and the euro area has declined and is projected to decline further in the following years, to below 1 %. The general government debt-to-GDP ratio is projected to follow a similar path, decreasing to 85.2 % and 79.8 %, for the euro-area and the EU-28 respectively, a trend that, while positive, means levels are still a long way from the expected 60 %.

After significant fluctuations in 2016, inflation rose closer to the target, of around 2 %, by the fourth quarter of 2017, helped by the recovery in oil prices, but is not expected to reach the target until 2019, due to a negative base effect in energy prices and the increase of the euro's nominal effective exchange rate. In this context, the European Central Bank continued with its unconventional monetary policy in 2017 and decided to keep it for 2018, albeit moderating its purchases as of January 2018, due to the improving economic outlook and the need to reduce the risk of financial imbalances.

The aforementioned positive trends concerning the euro-area economy, as well as the results of the various elections held in 2017 in the EU, have likely outweighed the negative developments such as the deteriorating geopolitical context, the uncertainty concerning the Brexit negotiations and the policy-mix outlook in the US. This has helped to strengthen the common currency against its major counterparts since spring 2017. As a result, the euro has appreciated against most of its major trading partners' currencies. While these trends are projected to continue over the next two years, their strength is expected to subside, on account of the phasing out of temporary supportive fiscal measures in Member States and the tapering of accommodative monetary measures.

The 2018 EU Budget amounts to €160.1 billion, representing only some 2 % of total public spending in the European Union – approximately 1 % of gross national income (GNI). Despite its volume, the overall impact of the EU Budget is amplified by a number features, including: a higher share of resources devoted to investment than in national budgets; the capacity to leverage additional funding from other sources; and attention to policy areas where the pooling of resources can provide the EU as a whole with added value (e.g. research, innovation and development cooperation).

Agreed by the European Parliament and the Council of the European Union, the 2018 budget focuses on priorities such as promoting sustainable growth, creating employment, especially for young people, and addressing migration and security challenges. In recent years, these persistent policy challenges have almost exhausted the flexibility provisions available under the EU's 2014-2020 multiannual financial framework (MFF). However, the 2017 adoption of the mid-term revision of the MFF has strengthened a number of flexibility tools, proving instrumental in reinforcing the resources devoted to key policy areas in 2018.

With the 2014-2020 MFF in the second half of its programming period, the debate on its successor and further streamlining of the EU Budget has already gained momentum, with a reflection paper on the future of EU finances published by the European Commission. Taking into account difficulties that the current MFF has experienced, one objective is to increase capacity to respond to the concerns of EU citizens and to the unprecedented challenges the Union is facing. In May 2018, following a broad consultation of stakeholders, the Commission is expected to present its proposals for the post-2020 MFF and a possible reform of the EU's financing system.

Many instruments in the EU Budget directly or indirectly address the objectives of industrial policy, against the backdrop of a quickly evolving sector. The importance of the sector to the EU, in both economic and political terms, as well as the changing nature and scope of industry and industrial policy, made it the subject of this year's economic focus. This examines industry in the EU from four perspectives (production, gross value added, employment and the regional perspective), its evolution over the past decade and the impact of the crisis, and presents the EU-level initiatives designed to rekindle industrial activity.

As for the expenditure side of the budget, the 2014-2020 MFF sets the maximum level of resources (‘ceiling’) for each major category (‘heading’) of EU spending for a period of seven years. Negotiated between 2011 and 2013 against the backdrop of the economic crisis and fiscal consolidation in Member States, the current MFF is the first to have lower resources in comparison with the previous programming period (2007-2013). The share of EU GNI devoted to the MFF was set at 1 % for commitments and 0.95 % for payments (down from 1.12 % and 1.06 % for the 2007 to 2013 period).

The MFF resources for commitments over the entire 2014 to 2020 periods have amount to €1 087.1 billion in current prices (or €963.5 billion in 2011 prices). The MFF details the annual ceilings for new commitments in each spending category and an overall ceiling for annual payments. In addition, it contains some special instruments outside the MFF ceilings (e.g. the Emergency Aid Reserve, the European Globalisation Adjustment Fund and the European Union Solidarity Fund) and flexibility provisions, to give some room for manoeuvre in the case of unexpected events. The challenge is to strike the right balance between predictability of investments and the capacity to address the unforeseen events and new priorities that can emerge during a rather long programming period.

As in previous years, the mobilisation of the flexibility tools of the MFF proved necessary to finance budgetary priorities and reinforcements, already at the initial stage of adoption. The conciliation agreement for the 2018 budget included the mobilisation of two such instruments: the Global Margin for Commitments and the Flexibility Instrument (table 1). In the resolution accompanying the mobilisation of the latter, the European Parliament reiterated its longstanding view that the flexibility of the EU Budget should be increased.

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In the course of 2017, the European Parliament and the Council reached agreement on and adopted the legislative or budgetary measures related to the following proposals of the MFF review package: bringing forward the offsetting of the contingency margin; establishing the European Fund for Sustainable Development (EFSD), the EFSD Guarantee and the EFSD Guarantee Fund; creating an initiative to promote the availability of internet connectivity in local communities;

extending the duration of the European Fund for Strategic Investments (EFSI) and increasing its means; and revising the provisions applicable to agricultural expenditure.

Since mid-2003 industrial output in the EU has been growing in a relatively stable way. This growth ended with the onset of the crisis in May 2008 when the month-on-month rate of change for the EU industrial production index turned negative. The pre-crisis peak of April 2008 was followed by steep decline (-22%) and marked by the trough recorded in April 2009 when industrial output was the lowest since September 1997. This abrupt fall lasted one year, and rebounded only in May 2009. At this early stage in the crisis, more developed financial markets in the euro area helped to some extent to mitigate the impact of the crisis on growth in industrial sectors dependent on external finance. However, this effect weakened in later stages of the crisis, particularly on well-developed markets for bank loans.

In 2016, from the perspective of gross value added (GVA), industry accounted for approximately 20 % of total GVA for the EU, while services accounted for almost 75 %. These shares have been on more or less opposing paths since the beginning of the millennium: in 2000, industry corresponded to 22 % of the total GVA for the EU, dropping to 20 % by 2008 and to 19 % by 2016. In contrast, services have been slowly gaining in importance in terms of value creation, from 70 % in 2000, to 72 % in 2008 and 74% in 2016.

Comparing globally with other industrially developed countries, it can be observed that the USA and Japan followed similar paths: in the USA, industry accounted for 19 % in 2000, diminishing to 16 % in 2015, while in Japan, industry declined from 26 % in 2000 to 23 % in 2015. A last point concerning the comparison between industry and services is that it seems that services weathered the financial and economic crises with less turbulence than industry: in the EU, the GVA created by services dropped by 3 % in 2009, as opposed to 12 % for industry. Similarly, the year after, the GVA generated by services increased by 3 %, while industry-created GVA increased by 8 %.

In the European Union, the relative importance of industry in total employment, as measured by its share, has also declined since the millennium, from 19.3 % to 15.3 %. Furthermore, despite a generally declining trend identified above, it is still visible that industry is much more important in the Member States that joined the EU during and after the 2004 enlargement than in the other Member States. In 2016, the highest share of persons employed in industry relative to total employment in the country's economy was recorded in the Czech Republic (29.1 %), Poland (23.5 %), Slovenia (22.5 %), Slovakia (22.3 %), Romania (21.4 %), Estonia and Bulgaria (both at around 20.2 %). Despite this relative importance, however, only Poland and Romania have kept the percentage of their population occupied in industry virtually unchanged. The rest of the countries have followed a (slower or faster) declining trend, attributed by Falkowski both to structural changes implemented under the EU's industrial policy and to the economic crisis of 2009, which had a considerable impact on those countries' industries.

On the other side of the spectrum, the EU Member States occupying the least people in industry (relative to their total population in employment) in 2016 were the United Kingdom (9 %), Greece (9.3 %), the Netherlands (9.5 %) and France (10.5 %).

Many other stakeholders are involved in the debate, and some have already expressed their views. There is general agreement that the EU Budget needs reform. Focus on results, leverage, synergies, conditionality and European added value is often mentioned among the principles that should underpin any changes. Stakeholders from academic, expert and political circles underline that in a rapidly evolving world, the design of the EU Budget has to ensure the right balance between predictability of investments and capacity to respond to new challenges and priorities. The problems that the current MFF faces demonstrate how difficult the task is, and the weaknesses of the EU financing system. In summary, the main issues highlighted by the EU institutions and stakeholders are the following:

- Reform of the financing side of the budget – the current system of EU own resources is widely criticised and there is a growing consensus on the need for reform. It is expected that the HLG's recommendations on own resources will make a significant contribution to the Commission's concrete proposals for change, which should be tabled together with the post-2020 MFF proposal.

- Duration of the MFF – the current, seven-year MFF is not synchronised with the five-year political cycle determined by the political terms of the European Commission and the European Parliament. Proposals that could fix the problem include a five-year MFF aligned to the political mandates of the main EU institutions; five + five years with a compulsory mid-term review; ten years with compulsory mid-term revision for programmes requiring long-term programming and five years for other elements of the MFF. According to others, the seven-year MFF has its advantages and should not be changed.
- MFF priorities and structure – some analyses consider the current structure of the MFF outdates, too focused on past priorities and insufficiently supportive of initiatives with high European added value. From this perspective, aligning the budget to a new and evolving set of EU strategic priorities appears to be a crucial aspect of the reform. New areas frequently identified as requiring stronger financial EU intervention include border management, migration and refugees, security challenges and defence, and a reinforced investment policy.
- Flexibility – experience of the implementation of the current MFF appears to show that the capacity to respond swiftly to new challenges requires that more flexibility and reserve capacity be built into the MFF. There is considerable demand for greater possibilities to shift resources within and between MFF headings; for creation of a special crisis reserve; for the re-use of de-committed amounts and fines; and action to secure bigger margins under annual ceilings. At the same time, however, the question of ensuring the MFF's predictability is also raised.
- Unity of the budget – the proliferation of new instruments for financing EU actions, especially in external policy, and partially outside the EU Budget (e.g. the EFSI; EU trust funds for external action; and the Facility for Refugees in Turkey), raise questions about the principle of the unity of the budget and democratic accountability. The creation of instruments with a stabilisation function for the euro area – such instruments could be developed outside or within the EU Budget. The European Commission has already expressed its intention to put forward proposals within the EU framework in the context of the next MFF.
- Financial instruments – the use of innovative financial instruments has become an important feature of the current MFF. While these can be advantageous to the budget's effectiveness, some aspects of their functioning in the EU Budget will have to be reconsidered, for instance their interplay with grants, capacity to leverage public and private investments, simplification of delivery, etc.
- European Development Fund (EDF) budget – the €30.5 billion EDF, an intergovernmental tool for development cooperation with the African, Caribbean and Pacific Group of States (ACP), is not currently included in the EU Budget. In the 2013 inter institutional agreement on budgetary matters, the Commission declared its intention to propose the EDF's inclusion in the EU Budget as of 2021.
- Role of the budget in EU economic governance and respect of rule of law – there are proposals to strengthen and extend existing links between the EU Budget and the EU's economic governance framework (for example, macro-conditionality of the ESI funds and links with country-specific recommendations). The idea of creating stronger links between the disbursement of EU funds and respect for the rule of law has also been mentioned.
- Changes to the decision-making process – the current procedure leading to agreement on the MFF with a unanimity vote in the Council are seen as one of the main obstacles to budget reform. Stakeholders are calling for greater transparency in the process and the involvement of EU citizens. Some proposals emphasise the need to shift towards qualified majority voting in the Council or to give more power to the European Parliament.

References

Andrews, D., C. Criscuolo, and P. Gal. 2016. "The Best versus the Rest: The Global Productivity Slowdown, Divergence across Firms and the Role of Public Policy." OECD Productivity Working Papers No. 5. Paris: OECD Publishing. Available at http://dx.doi.org/10.1787/63629cc9-en.

Bacchetta, P. and E. van Wincoop. 2013. “The Great Recession: A Self-Fulfilling Global Panic.” NBER Working Paper No. 19062. Cambridge, MA: National Bureau of Economic Research. Available at http://www.nber.org/papers/w19062.

Baldwin, R. and S. Evenett, eds. 2009. The Collapse of Global Trade, Murky Protectionism, and the Crisis: Recommendations for the G20. A VoxEU.org Publication. London: Centre for Economic Policy Research (CEPR). Available at http://www.felixpena.com.ar/contenido/negociaciones/anexos/2009-03-murky-protectionism.pdf.

Baumol, W. 1986. “Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show.” The American Economic Review 76 (5): 1072–85.

Boskin, M., R. J. Gordon, E. Dullenberger, Z. Grilliches, and D. Jorgenson. 1996. “Toward a More Accurate Measure of the Cost of Living: Final Report of the Senate Finance Committee from the Advisory Commission to Study the Consumer Price Index.” Washington, DC: Advisory Commission to Study the Consumer Price Index. Available at https://catalog.hathitrust.org/Record/003239902.

Brynjolfsson, E. 1993. “The Productivity Paradox of Information Technology.” Communications of the ACM 36 (12): 66–77.

Brynjolfsson, E., F. Eggers, and A. Gannameneni. 2017. “Using Massive Online Choice Experiments to Measure Changes in Well-being.” Working paper forthcoming, research cited in the Economist, August 24, 2017, https://www.economist.com/news/finance-and-economics/21727073-economists-struggle-work-out-how-much-free-economy-comes-cost.

Chen, J. 2016. “How Do Switching Costs Affect Market Concentration and Prices in Network Industries?” The Journal of Industrial Economics 64 (2): 226–54.

Darvas, Z. and G. Wolff. 2016. “An Anatomy of Inclusive Growth in Europe.” Blueprint Series 26, Brussels: Bruegel.

De Loecker, J. and J. Eeckhout. 2017. “The Rise of Market Power and the Macroeconomic Implications.” NBER Working Paper No. 23687. Cambridge, MA: National Bureau of Economic Research. Available at http://www.nber.org/papers/w23687

The Economist. 2017a. “Data Is Giving Rise to a New Economy.” The Economist, Fuel of the Future. May 6, 2017. Available at https://www.economist.com/news/briefing/21721634-how-it-shaping-up-data-giving-rise-new-economy. 2017b. “The ‘Free’ Economy Comes at a Cost.” The Economist, Free Exchange, August 24, 2017. Available at https://www.economist.com/news/finance-and-economics/21727073-economists-struggle-work-out-how-much-free-economy-comes-cost.

Federal Reserve Bank of Minneapolis. 2017. “The Recession and Recovery in Perspective.” Available at https://www.minneapolisfed.org/publications/special-studies/recession-in-perspective.

Gordon, R. J. 2014. “The Demise of U.S. Economic Growth: Restatement, Rebuttal, and Reflections.” NBER Working Paper No. 19895. Cambridge, MA: National Bureau of Economic Research. Available at http://www.nber.org/papers/w19895.

Helpman, E., O. Itskhoki, M.-A. Muendler, and S. J. Redding. 2017. “Trade and Inequality: From Theory to Estimation.” The Review of Economic Studies 84 (1): 357–405. Available at https://doi.org/10.1093/restud/rdw025.

The Global Competitiveness Report 2017–2018

Hoekman, B., ed. 2015. The Global Trade Slowdown: A New Normal? A VoxEU.org eBook. London: CEPR Press. Available at http://voxeu.org/sites/default/files/file/Global%20Trade%20Slowdown_nocover.pdf.

IMF (International Monetary Fund). 2017. World Economic Outlook Update, April 2017: Gaining Momentum? Washington, DC: IMF. Available at http://www.imf.org/en/Publications/WEO/Issues/2017/04/04/world-economic-outlook-april-2017.

Ito, J. and J. Howe. 2016 Whiplash: How to Survive Our Faster Future. New York: Grand Central Publishing.

Lakner, C. and B. Milanovic. 2016. “Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession.” The World Bank Economic Review 30 (2) 203–32. Available at https://doi.org/10.1093/wber/lhv039.

The Maddison Project Database. No date. The Maddison Project. Available at http://www.ggdc.net/maddison/maddison-project/home.htm.

McAfee, A. and E. Brynjolfsson. 2017. Machine, Platform, Crowd: Harnessing Our Digital Future. New York: W.W. Norton and Company.

McKinsey Global Institute. 2016. “Secular Stagnation and Low Investment: Breaking the Vicious Cycle.” Discussion Paper, Draft 2.0, April 2016. Available at http://www.mckinsey.com/global-themes/ europe/secular-stagnation-and-low-investment-breaking-the-vicious-cycle.

McMillan, M. S. and D. Rodrik. 2011. “Globalization, Structural Change and Productivity Growth.” NBER Working Paper No. 17143. Cambridge, MA: National Bureau of Economic Research. Available at http://www.nber.org/papers/w17143.pdf.

OECD (Organisation for Economic Co-operation and Development). 2017. Bridging the Gap: Inclusive Growth 2017 Update Report. Paris: OECD. Available at http://www.oecd.org/inclusive-growth/Bridging_the_Gap.pdf.

Rodrik, D. 2017. “Populism and the Economics of Globalization.” CEPR Discussion Paper No. 12119. Available at https://drodrik.scholar.harvard.edu/files/dani-rodrik/files/populism_and_the_economics_of_globalization.pdf.

Sala-i-Martin, X. 2006. “The World Distribution of Income: Falling Poverty and … Convergence, Period (*).”Quarterly Journal of Economics 71 (2): 351–97.

Schechter, A. 2017. “The Rise of Market Power and the Decline of Labor’s Share.” Pro-Market blog post, August 14, 2017. Available at https://promarket.org/rise-market-power-decline-labors-share/.

Schwab, K. 2016. The Fourth Industrial Revolution. Geneva: World Economic Forum.

SWIID (Standardized World Income Inequality Database). No date. SWIID: The Standardized World Income Inequality Database. Available at http://fsolt.org/swiid/.

UNCTAD (United Nations Conference on Trade and Development). 2009. Assessing the Impact of the Current Financial and Economic Crisis on Global FDI Flows. UNCTAD. Available at http://unctad.org/en/Docs/diaeia20093_en.pdf.

World Economic Forum. 2017. The Inclusive Growth and Development Report 2017. Geneva: World Economic Forum. Available at https://www.weforum.org/reports/the-inclusive-growth-and-development-report-2017.

EU PROGRAMS IN RESEARCH FIELD

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Abstract

Starting from research programs managed both at national and European level, we can state that between 2014 and 2020 the funds allocated to research programs have grown to just over € 70 billion in the Horizon 2020 program. The National Plan for Research and Development 2015-2020 through GD 583/2015 has allocated a total budget of PNCDI III for the entire implementation period of no more than 15,000 million lei and it provides from state budget funds, non-reimbursable external funds and contributions from project partners. However, in order to have budget planning for fundamental research, deviations may occur due to its specificities. Funding funders from developed countries usually avoid submitting priority lists. However, each state promotes lists of domains in which a university or research institute is or has been active in a given period. In order to have research projects, programs and budgets, we need to know our national priorities defined in the 2014-2020 Strategy for Research, Development and Innovation (SNCDI 2020), together with its main implementation tool, the National R & Innovation 2014-2020 (PNCDI3), as well as a related instrument, the Sectoral Operational Program for Research, Development and Innovation 2014-2020 (SOP-CDI).

Keywords: research, innovation, research funding, programs

JEL classification: O39, I22

Introduction

Fundamental research has evolved since ancient times in directions that were not anticipated at the time of research planning. For this reason, the researcher focused on fundamental knowledge must be given a wide choice of proposed projects. Along with the fundamental research developed at the level of the research institutes, innovation has always been a driver of economic and social development at the level of the transfer of research results in the business environment. A study by the World Bank demonstrates how "research and technological development increase labor productivity, competitiveness, and ultimately lead to well-being: two countries, such as Ghana and South Korea, who have gone from the same level of development, have reached to have a much different level after only 40 years, two-thirds of the difference owing to the accumulation of knowledge. "

Methodology of Scientific Research

This has been instrumental in the research and innovation methodology, we have used observation and examination tools, research methods based on the basic principles of scientific research, and we have also created procedures based on factual analysis as a result of significant practical experience and intensive documentation at the level of national and international literature. The analysis of the main paper for strategy in research, programs in research and opinions.

Research Results

Based on these considerations, the European Union has set strategic goals and ambitious initiatives, using science as a driver of economic growth and societal development. The above demonstrates that science is vital to welfare and integrated societal development, and therefore that investment in science is the pillar of sustaining the socio-economic environment for prosperity.

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Romania needs to invest in its own research and innovation, as well as to cooperate internationally with international institutes, respectively with science produced in other countries, and jointly develop joint technology projects. At present, we live in a world where fundamental knowledge is freely accessible, while most technologies are no longer a national monopoly. It is innovation that ensures competitiveness and economic progress. Lack of competitiveness means, especially in a global economy, limited public and private resources, and thus the inability to create and benefit from quality products and services - including through the inability to acquire up-to-date technologies produced in other countries. Investing in research and innovation is therefore supported by their role in increasing the competitiveness of the national economy and regional economies. In other words, the innovation and research on which it is based are essential to meet specific local needs. Research and innovation have an important transnational dimension, transferable from one society to another, but at least some of the community-specific issues cannot wait to be resolved elsewhere. And even when solved elsewhere, solutions must be tailored or customized. The investment in own research and innovation is therefore justified by the need to solve the specific problems, regardless of their nature, of the Romanian society. Returning to the fundamental research we can state that its purpose is to increase the Romanian participation in the development of the economic and social theory in general, the enrichment of the set of case studies, as well as the international debate on the values and the economic and socio-political construction of the contemporary world . It is considered that studying long-term phenomena can favour both a theoretical construction with broader explanatory power and the adoption of more appropriate administrative policies and actions.

Along with fundamental research and innovation, another important aspect is the strengthening of inter- and multi-disciplinary research both in new areas and by introducing the methods of some disciplines (mathematical methods, physic-chemical analytical methods, computational methods and analysis of data) in solving problems from different disciplines (humanities, biology, etc.).

In order to be able to propose concrete research projects to be funded through national programs, we need to know the main general objectives, specific objectives and specific cross-cutting objectives included in the National Plan for Research, Development and Innovation 2014-2020 (PNCDI3) as well as a related instrument , Sectoral Operational Plan for Research, Development and Innovation 2014-2020 (SOP-CDI).

Main General Objectives:

 OG1. Increasing the competitiveness of the Romanian economy through innovation. The objective is to support the performance of economic actors on global value chains. This implies, among other things, increasing the impact of economic activities through a better transfer of knowledge and expertise between research and the economic environment. The strategy aims to increase the economic relevance of research through the development of new technologies, products and services, fostering partnerships between economic and research actors and stimulating economic activities that rely on research-driven innovation.

 OG2. Increasing the Romanian contribution to the progress of frontier knowledge. The strategy assumes the increase of the international visibility of the Romanian experimental research and development. Achieving the goal will require better integration of researchers into international science initiatives, partnerships and programs; attracting top performers and training top researchers; to support research infrastructures and to increase their use and accessibility; as well as the formation of critical mass of researchers in the most promising scientific fields.

 OG 3. Increasing the role of science in society. The main purpose of investing in research, development and innovation remains, ultimately, to raise the standard of living and quality of life for citizens. The strategy assumes this objective not only by investing in and supporting RDI-based economic activities, but also by promoting programs through which research responds directly to specific needs of the public sector. They aim both to solve specific public issues through innovative solutions and to provide expert assistance in public policy-making.

Among the specific objectives, we mention the following:

 OS1. Create a stimulating environment for the private sector initiative through tools to drive entrepreneurship and market R & D results, as well as by credibility of partnerships between public and private actors.

 OS2. Supporting the intelligent specialization process by concentrating resources in areas of research and innovation with economic relevance and potential for R & D.

 OS3. Concentrating a significant part of RDI activities in areas of public relevance to increase the capacity of the RDI system to respond to the needs of the public sector and to develop the RDI's ability to adopt research results.

 OS4. Supporting the aspiration towards research at the frontier of knowledge through a better integration of Romanian research in the European and international space of research and development and innovation projects and initiatives.

Among the specific cross-cutting objectives, we mention the following:

 OS1. Doubling the total number of researchers by 2020 by ensuring a rapid and sustainable growth, numerical and qualitative, of human resources in research, development and innovation.

 OS2. Developing high performing research organizations capable of supporting large-scale science programs through institutional funding mechanisms based on monitoring and evaluation procedures in line with international best practices.

In addition to knowing the objectives of the PNCDI III Programs, we must also know the PNCDI III Programs, which support the research projects at national level from the point of view of financing:

a) *Program 1:* Development of the national R & D system - to increase its capacity in resources, performance and quality of RDI activities;

b) *Program 2*: Increasing the competitiveness of the Romanian economy through research, development and innovation - for increasing the productivity of enterprises through RDI within a national innovation system;

c) *Program 3:* European and International Cooperation - for the circulation of knowledge and ideas through participation in international research programs and institutions and access to research resources not available in Romania;

d) *Program 4*: Fundamental and Border Research - to maintain niche domains where Romanian fundamental research has a comparative advantage and a critical mass of researchers or where there are opportunities for international collaboration that adds to the Romanian fundamental research the "border" dimension, by obtaining cutting-edge scientific and technological outcomes with marketing prospects;

e) *Program 5*: Research in areas of strategic interest - support programs run by scientifically relevant institutions with a scientific coordination role in areas of strategic interest for the formation and development of research institutions and national competences in areas of strategic interest for Romania.

According to the European Commission, "the main challenge for Romania is, at present," its low competitiveness ", which should lead us to strategic measures to integrate the results of research into production, and especially into" niche "production. Moreover, this aspect of low competitiveness comes not only in the context in which the results of research are often not transferred, but also in the context of a low level of entrepreneurship, and entrepreneurship based on innovation suffers in particular. The innovation rate (CIS) in companies is small, as is the private investment in R & D (EBRD). Concerning the intensity of business research and other private innovation indicators, the average annual growth rate for 2000-2011 was negative. The data also indicate a very limited marketing capacity of the Romanian research and innovation results. Last but not least, few multinational companies brought with them a substantial research component in the country. To respond to these challenges, market mechanisms need to be fostered by stimulating innovative entrepreneurship and involving companies in R & D and innovation. Furthermore, private capital must be attracted in support of innovation based on research and development.

Conclusions

In order to promote and support cooperation between research and business, concrete action measures need to be taken, such as: the creation of indirect tax financing mechanisms for RDI activities to encourage local investment in R & D. In recent years, these fiscal mechanisms (tax credits) have become common among OECD countries, as well as among the so-called BRIC countries; involving venture capital funds and guarantee funds to support research and innovation activities. One of the reasons often cited for Romania's low level of innovation-based entrepreneurship is the difficult access of SMEs to private equity. On the one hand, the banking market does not sufficiently support entrepreneurial risk, and even less the one based on innovation. On the other hand, the tax environment seems unattractive to investment funds. For example, in a 2008 study evaluating how favorable the tax and legal systems of many private investment funds are, Romania ranks at the queue of the ranking. At the end of 2011, four financial instruments addressed to SMEs in the country were introduced under the JEREMIE European Small and Medium Enterprises Initiative: three guarantee funds and a venture capital fund all contracted with financial intermediaries; more recently through the COSME program, the European Commission financially supports the innovative entrepreneurial initiative by creating these financial support mechanisms; Intellectual Property Management (The relatively successful success, in the last strategic period, of scientific publications has not been doubled by similar patent gains. As far as the intellectual property indicators are concerned, Romania is still far below the European average.

For example, Romanian patents are around 1.5% of the EU average. Part of this is also reflected in poor business research investment, including multinational companies. The World Bank attributes this reticence to the legislative ambiguity in the field of intellectual property. The legal framework of intellectual property is one of the main points.

Bibliography

* * *, Romanian National Development and Innovation Research Plan 2015-2020;

* * *, Romanian PNCDI III programs;

* * *, Horizon 2020 Framework Program;

* * *, Romanian National Research, Development and Innovation Strategy 2014-2020

* * *, HG 583/2015 with subsequent amendments and modifications, Monitorul Oficial nr.594 / 2015

* * *, HG 929 of 21 October 2014, Romania, Monitorul Oficial nr.785 / 2014.

CONSULTING IN FINANCIAL SERVICES (CFS)

Ștefan MANTEA[94, 95], PhD

Abstract

We are currently witnessing a dynamic of innovation in financial services, and the role of *Integrated Consultancy* is of major importance, with researchers and consultants specializing in sustainable integrated development. They are active in developing models tailored to each type of economy at national level, each development region and each economic agent. Research in the field of financial services, whether we are talking about the public or private sector, covers all institutions, instruments and markets as a whole, and is for the financial services industry, including, but not limited to, commercial banks, credit, investment banks, insurance companies, investment companies, pension funds, a real support in the development of mortgage products, mortgages, international bonds and financial innovations. The consulting services focus on the micro-analysis of the private operation and the public regulation of these activities globally.

Key words: financial services, integrated consultancy and sustainable development.

JEL classification: I25, Q14, M21

Concept of Consulting Activities

The process is that occurs when someone who has a problem or faces difficulty seeks the professional help of another person with special abilities to solve that problem alone or with him. It is a co-participatory action.

In other words, consultancy deals with problem solving and is a process that initiates, implements and manages change.

Counselling can also be defined as an intervention designed to change a set of more or less satisfactory conditions, or take advantage of an opportunity with the goal of improving. From the point of view of the consultant, this activity is:

- based on the provision of services to a client in order to obtain a certain profit;
- based on the sale or free allocation of consultant or consultant's time (capacity);
- based on people.

Due to the uniqueness of these issues, consultancy deals with intellectual property and capacity.

Consultancy is the process by which the consultant tries to motivate farmers to expand their business by developing their production capacities, by using information and innovative ideas to solve the technical and financial problems they face.

The name of the consultancy is rooted in the latin "consultare". In Romanian it came from the French verb "consulter", which means asking, asking for an opinion or advice, to consult with someone.

The advice should essentially be a counselling, recommendation, so that the proposals and the advanced solutions are not imperative for the beneficiaries. The consultant has the status of a counsellor, his responsibility is limited to the quality of the advice and recommendations he gives, and he is not directly involved in the action. It is the duty of the consultant to operate with the most advanced results of scientific research, adapted to the working environment.

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Consultancy Methods

The consultancy activity is an extremely complex, participatory activity that involves the interaction between two factors: the consultant service provider and their beneficiary. In a previous reasearch, we have shown what needs to be the requirements for a quality consulting service, and what are the qualities required for a good consultant. As far as the beneficiary is concerned, we have to deal with a huge variability of types and characters, as well as a level of knowledge in the field. In this situation, it is obviously the consultant's task of finding the most appropriate method so as to gain the confidence of the beneficiary, but also to put a correct diagnosis of the problem and to choose the most effective solution.

What is the optimal method that consultants can apply to contact, advise and persuade farmers?

There are four main groups of methods of consulting:

♦ Individual consultancy:

- individual discussions with farmers on their farm;
- individual discussions with farmers at the consultant's office.

♦ Group consulting:

- general aspects of group activity;
- study groups and interest groups;
- farm demonstrations;
- lots or demonstration farms;
- symposiums, round tables, exchanges of experience;
- days in the field.

♦ Information days;

- agricultural education courses.

♦ Mass media consultancy:

- campaign;
- fairs, exhibitions, contests.

♦ *Consultancy using media:*

The Purpose of Consulting Activities:

In order to decide which method or combination of methods should be applied, the purpose of the consultancy activity should be considered. Using any method or combination of methods, one of four objectives should be pursued:

- awareness;
- improving knowledge;
- changing attitudes;
- improving skills

Awareness: to make small changes in behaviour, awareness can be enough.

For example: A farmer who is already used to fertilize can be easily convinced to change the type of fertilizer he uses. A simple message on the radio or the newspaper may cause him to try the new fertilizer.

Improving knowledge: if the consultancy message is complex, then farmers can have trouble understanding it if they do not have the necessary knowledge.

For example: if the consultant noticed during the farm visit that feeding is deficient, he will have to show farmers how to improve the balance of food ration, but before that, farmers have to learn some basic principles about animal nutrition.

Changing attitudes: when the problem is different from their habits and their way of thinking, then farmers will have to be convinced of the effectiveness of the proposed solution. Optional methods are both individual and differentiated grouping methods that allow a solid exchange of information between people who trust each other professionally.

For example: the method to be used by farmers is the use of modern machinery, although they are convinced, for example, that manual maize harvesting on small plots is cheaper. It is up to the consultant to demonstrate through the calculation of gross margins the economic advantage of using modern technologies on small farms.

Improving skills: when farmers are aware that they do not have the skills required to apply certain measures, then learning must be done through demonstrations, symposiums, round tables, experience exchanges, days on the ground, visits to other farms or training courses professional.

For example: Cutting fruit trees and grapes.

Farmers are generally aware of the usefulness of this action, they have some knowledge about it and are ready to change their attitude, but they do not have the right practical skills. A practical demonstration of the professional cutting provided by the consultant will be particularly useful and will certainly attract many interested farmers.

To improve skills, one must first ask whether farmers are aware of the inadequacy of the current techniques used. This is especially necessary when the problem is not felt by farmers but only identified by the consultant. Once farmers become interested, brochures, leaflets or posters can be distributed. The next step would be to invite farmers to a demonstration followed by discussions. During the discussions, a study group can be set up to decide on the organization of a farm demonstration and farm visits. Group members who have adopted their techniques may then take part in demonstrations the following year.

Efficiency of consulting methods:

What method of consulting is most effective? This assessment depends on three criteria:

- the suitability of the method;
- efficiency - costs per farmer;
- possibilities of interaction;
- the appropriateness of the advisory method used depends on the purpose of the activity for which the method is used. In general, the goal of the consultant is to inform farmers, the ultimate goal being to implement consultancy messages and change attitudes;
- efficiency refers to the number of farmers who can be contacted with the resources of the consultancy service.

The cost to the farmer is lower when using mass media and large groups. Group methods are more expensive than mass-media or media-specific methods, and individual advice is of course the most expensive method and should be used in a limited number of cases.

Interaction refers to methods that stimulate interaction between farmers and consultants. In the advisory activity, one can also take into account the fact that farmers learn from each other, but in many cases this does not happen easily and the consultant must intervene by facilitating this process. For example, in France, the consultant also bears the name "animator", because one of his tasks is precisely to raise the interest of farmers' groups on certain subjects and to mediate the relations between them. Interaction makes it possible to adjust a technical agricultural message or information according to the farmer's specific situation and provide feedback to the consultant. Individual and group consulting methods allow interaction, while media use is no longer possible.

Another aspect to be considered is the efficiency of farmer advice. From the farmer's point of view, the efficiency and quality of the counselling service is appreciated by its own gain, farm development and revenue growth.

We believe that it would still be necessary to decipher the methods and techniques of consulting, but due to the limited space we will make it in a future issue of the magazine.

Agricultural consultant profession.

Agricultural consultancy has emerged as a profession as agricultural production has specialized and technologically developed, when all those interested in the field of agriculture have understood that this is a dynamic field in constant transformation, and that in order to obtain profit it must have as much information as possible and solutions. At present, in all advanced countries, agricultural consultancy is one of the main organizations through which all agricultural policies and strategies are pursued.

Naturally, this occupation required specialized people who, in addition to those with specific training in agricultural fields, would have a broader view of the whole field in relation to the economic, managerial and social aspects of the rural environment, and in at the same time, be as close as possible to the farmer. In order to better understand the role of the consultant, a comparison can be made with the role of the family doctor towards the specialist doctor.

In essence, the consultants are called to identify the issues and to influence the beneficiaries or advise them on the possible ways for action to improve the effectiveness of all aspects of their activities without having any formal authority over them, the date of competence.

People, businesses, or organizations that access the consultancy market prefer the services of a consultant or consulting firm for a wide range of reasons, including organizational style and activity, expertise, specialization, fame, etc. The price is always important in hiring a consultant, although it is not a decisive factor, but the education of billing services develops the responsibility of both the consultant and the beneficiary. The higher the fee paid, the more the customer expects from the consultant products with higher value. Finally, the quality of the consultancy can be appreciated by farm development and profitability.

The service provided by the consultant must be able to offer the beneficiary at least the following benefits:

- help the beneficiary to identify and understand the real issues that arise;
- to guide the activity towards achieving a beneficial result and not just for a simple activity report;
- the solution is relevant to the recipient, preferably with immediate application;
- be of unique applicability in a particular situation or problem, in other words to address the problems of the beneficiary and not the problems in general;
- to require specialized knowledge or skills for its use, these being the added value of the case by the consultant's contribution;
- respond to a request resulting from an opportunity or a change.

The best consultants are focused on effectively solving specific situations and are instructors with the appropriate skills. This gives rise to a number of key requirements for success in activity. These are:

- in modern advice, training is considered a major pillar. In choosing the method of work and during the collaboration with the beneficiary, the consultant intends to transfer his / her knowledge and personal experience to the beneficiary;
- consultants often see instruction (both formal and informal) as their main intervention tool and use it intensely;
- at the regional or regional level, vocational training centers, as well as business development offices, as special services for the beneficiaries, which can be used in conjunction with the other consultancy services or as separate activities can be developed;
- there must be a close link between consultants, agricultural education and research institutions, public and local government institutions, as well as private consulting firms from the country and abroad, professional associations, NGOs, etc.

The peculiarities of the agricultural process determine both agricultural producers and specialists to deal with complex problems that occur in many unpredictable situations and need to be resolved within a short period of time . These particularities can influence the work of the consultant, both as a consultancy manager and as a professional. The double hypostasis of the consultant shows us

that this activity is influenced by both the function he / she holds and the profession he / she exercises.

Agricultural advice, in content and form, is a profession because it requires both specific knowledge and skills in the exercise of competence in a given area or organization. Persons practicing this profession have common characteristics, techniques and similar knowledge, even though the fields in which they operate are distinguished by the nature and particularities of the agricultural branches (animal husbandry, agriculture, horticulture, veterinary medicine) or by the sphere of activity (technical, legal, vocational, social, etc.).

The profession of consultant in agriculture, in its modern perception and recognition, is relatively new. Many agricultural specialists have a high qualification in a specific field, recognized as highly performing, but lacking qualities that make them effective in advising agriculture.

Agricultural consultants must be able to adapt to the natural environment in which agricultural activity takes place. Its activity is carried out throughout the year, irrespective of the season and climatic conditions, often unfavorable (low temperatures, humidity, heat, wind). Also, the fact that activities in this area often take place on large spaces, at long distances, on unmodified roads, creates discomfort in the missions that the consultant has to fulfill and requires a good mental and physical constitution.

Another particular feature of the consultancy profession in agriculture is that the consultant's "patients" are often plants and animals, whose health is often manifested by inconclusive, unpredictable, difficult to diagnose, and therefore difficult to establish " a treatment line ". Also the "patient" character for the consultant is also the agricultural holding as a whole, regardless of its size. The complexity and the random character of the environment in which the agricultural holding operates make its mark on the content and characteristics of the consultant profession.

Another aspect of this profession is that the beneficiary of the consultancy activity is the man in the rural area (with his mentality and training) in general, and the man working in agriculture, in particular, and the difficulties encountered by the consultant in relations with people working in agriculture also consist in the fact that the average age and level of qualification of the population that performs agricultural activities is different to other professional categories, although the activities they have to carry out require various knowledge to allow the correct application of modern technologies , the management of tractors and agricultural machinery, the use of scientific information, the calculation of production costs, the estimation of loan and interest rates, the use of facilities created by European and governmental policies, to become competitive with other economic agents in the sphere of serum vices (Manta O., 2017)

The activity of the consultant in the field of agricultural branches presents a high degree of complexity, determined by the large number of factors influencing, directly or indirectly, the agricultural production, as well as the social and cultural environment in which they work. This aspect determines the need for the personnel carrying out consultancy activities to have some general qualities, knowledge and skills that the consultant in agriculture should have, which we have tried to synthetically present, in the following table:

The qualities of a consultant:

Group of qualities. Type of qualities.

Intellectual Capacity:

- the ability to have the necessary intelligence and logical thinking;
- the ability to observe, add, select and evaluate facts;
- discernment in assessing the facts.
- inductive and deductive reasoning;
- analysis and synthesis capacity;
- creative imagination and original thinking;
- the desire for self-improvement.

Ability to understand people and work with them:

- respect and tolerance for interlocutors;
- making light human contacts;

 the ability to anticipate and evaluate human reactions;
 the ability to gain confidence and respect;
 be patient and understanding of people's opinions.

Character qualities:

 a sincere desire to help others;
 warmth;
 honesty and firmness;
 the ability to recognize the limits of their own competence;
 honesty;
 the ability to recognize mistakes and learn from failures;
 perseverance and modesty;

Ability to communicate, convince and motivate:

 the ability to listen to and understand the interlocutors (beneficiaries);
 ease of speaking verbally and in writing;
 pedagogical qualities in promoting their own ideas;
 ability to motivate actions.

Intellectual and emotional maturity:

 stability and balance of behaviour and actions;
 independence in drawing out objective conclusions;
 the ability to withstand pressure, frustration and insecurity;
 have a sense of humour and generate enthusiasm for his ideas;
 the ability to act in a balanced, calm and objective manner;
 stress resistance;
 self-control in all situations;

Qualities relating to temperament and human resources:

 health and vigour;
 self-control;
 energy and balance;
 healthy ambition;
 courage, initiative and perspective in action;
 enterprising spirit;
 the ability to face and solve problems effectively.

Apart from the knowledge acquired in the faculty, in an agricultural specialty, the consultant must know and apply within the actions that he undertakes and notions of:

 general economy, economic policies and marketing;
 journalistic generalities: knowledge of the local and national media, the journalism ethics, the history of the rural world;
 evolution of agriculture, approach and European and international legislation;
 writing and oral communication skills;
 developing skills and competences;
 human resources management;
 food safety and traceability of agricultural products;
 organization of agricultural and agri-food chains;
 project management and management;
 management and management of an agricultural holding, as well as associative forms;
 die / logistics / distribution;
 diagnosis of an agricultural holding;
 eco-economy and environmental protection.

The individual success of the consultant will depend on how they will use these qualities and knowledge in their work, and the success of the organization or firm depends on the quality of its consultants. From the above mentioned, it appears that the consultancy activity in agriculture is an extremely complex but very important profession, which can influence the development of the rural area in general and in particular the progress and the welfare of each farmer. In Romania, there

was a public consultation system but it was disorganized in 2009-2010 and therefore we believe it is necessary to build a new system of agricultural advisory performance, unsubordinated neither politically nor administratively to the state and serving only the interests those who are involved in agricultural activities (Manta O, 2017).

In the consultancy in financial and technical issue, special in the actual context is necessary to create a development a multidisciplinary professional activities in consultancy field, this means to have the complete packet of the financial and technical services for the final beneficiary.

The next period we will assist to the new digital consultancy solution for the clients and the mobility for the consultancy people everywhere in the world, and this will be have double impact for the cost of the services and for the rapidity for delivery the services.

Bibliography

Alan Pilkington, Kah Hin Chai, "Research Themes, Concepts and Relationships: A study of International Journal of Service Industry Management (1990 to 2005)," International Journal of Service Industry Management, (2008) Vol. 19, No. 1, pp. 83–110

Anders Gustofsson and Michael D. Johnson, Competing in a Service Economy (SanFrancisco: Josey-Bass, 2003), p.7

Downton, Steve; Rustema, Hilbrand; van Veen, Jan (1 August 2010). Service Economics: Profitable Growth with a Brand Driven Service Strategy. Novetum Service Management, Limited. ISBN 978-9963-9838-0-3

John Swearingen: Operations Management - Characteristics of services

James A. Fitzsimmons, Mona J. Fitzsimmons: Service Management - Operations, Strategy, Information Technology

Johnston, Robert; Clark, Graham (2008). Service Operations Management: Improving Service Delivery. Financial Times/Prentice Hall. ISBN 978-1-4058-4732-2

Petit, Pascal (1991). "Services". In Eatwell, John; Newman, Peter K.; Milgate, Murray. The New Palgrave: A Dictionary of Economics. 4. Macmillan. pp. 314–15. ISBN 978-0-333-37235-7

Russell Wolak, Stavros Kalafatis, Patricia Harris: An Investigation Into Four Characteristics of Services

Sharon Dobson: Product and Services Strategy

Sheelagh Matear, Brendan Gray, Tony Garrett, Ken Deans: Moderating Effects of Service Characteristics on the Sources of Competitive Advantage - Positional Advantage Relationship

Valerie Zeithaml, A. Parasumaran, Leonhard Berry (1990): SERVQUAL [1]

Valerie Zeithaml, A. Parasumaran, A.; Berry, Leonard L. (1990). Delivering Quality Service: Balancing Customer Perceptions and Expectations. Simon and Schuster. ISBN 978-0-02-935701-9.

* * *, Athens University of Economics and Business: Introduction to Services Marketing

THE LINK BETWEEN OFFICIAL DEVELOPMENT ASSISTANCE AND INTERNATIONAL TRADE FLOWS – INSIGHTS FROM ECONOMIC THEORY

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Abstract

As noted in many studies of development aid there are many reasons why one might expect to observe a correlation between aid and trade flows from a donor to a particular recipient. The paper firstly presents Bulgarian participation in development cooperation to disclose the motivation for studying the relation between aid and trade. The main section summarises some insights from economic theory literature on the rationale and the potential economic gains of development assistance donors as well as the findings of a number of studies analysing the existence, direction and strength of the linkage between the dynamics and volume of development aid and international trade flows. The last section outlines the author's intentions for a future own study on this correlation.

Keywords: ODA, Development assistance, TOF, international trade

JEL classification: F14, F35

Introduction

International trade and foreign aid are the two main instruments for generating and reallocating wealth in the world economy and represent important ways through which industrialised countries can contribute to the development of poorer nations.

The policy for cooperation with developing countries is new to Bulgaria as in the course of the transition over the past two decades assistance to these countries could not be a foreign policy priority for obvious reasons. On the other hand, relations between Bulgaria and many of these countries in the decades before left a lasting mark in many of them, contributing to their economic development. In recent years, serious efforts have been made in Bulgaria to restore good practices in this respect, to rebuild the Bulgarian presence in developing countries on the basis of the existing former experience and of the new aims and priorities of Bulgarian foreign policy. After the end of the transition to a market economy and the accession to the European Union, Bulgaria has the task of restoring its position as a donor of international aid under the new conditions. The implementation of Bulgaria's transition from the status of a recipient of international aid into a donor makes it necessary a special attention to be paid to the many issues in this regard because of the specific commitments arising from the country's new status.

The paper firstly presents Bulgarian participation in development cooperation to disclose the motivation for studying the relation between aid and trade aimed at drawing recommendations on the strategic priorities which Bulgaria has to set in its participation in the International Development Cooperation. The main section summarises some insights from economic theory literature on the rationale and the potential economic gains of development assistance donors as well as the findings of a number of studies analysing the existence, direction and strength of the linkage between the dynamics and volume of official development aid (ODA) and international trade flows. The last section outlines some directions and features of a future own econometric study of this link, focusing on similar to Bulgaria EU members (which are also members of the Development Assistance Committee – DAC) members on one hand, and least developed countries (LDCs) from Sub-Saharan Africa – on the other.

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Study Rationale: the New Role of Bulgaria in Development Cooperation

If development assistance is seen as a measure not only to assist developing countries but also as a means of strengthening Bulgarian positions, ties and credibility on the international scene and as a way of creating and strengthening foreign trade relations, Bulgaria could take advantage of it in pursuit of its foreign and external economic policy objectives. This implies the optimal utilisation of the opportunities provided in order to achieve the maximum result both for the recipient-countries and for Bulgaria and its interests and priorities. In this sense, development policy resources should be used purposefully and focused, taking into account the potential economic benefits that can be derived from ODA granting and allocation.

Participation in International Development Cooperation is an integral part of the Bulgarian foreign policy and is carried out in accordance with the common EU policy in this field. In national law, however, this issue was settled only in 2011 by Council of Ministers Decree 234, although relations between Bulgaria and a number of developing countries over the decades prior to the transition period have left a lasting trace in many of these countries, contributing to the economic their development.

From the point of view of Bulgarian participation in the development finance process, its membership in the European Union clearly outlines its donor position. The EU Development Cooperation Policy requires an annual investment of significant funds from the national budget, and the country's obligation related to development finance are long-term and will become larger. Since 2007, Bulgaria as a member of the EU has started to provide ODA, which for the period 2010-2013 amounts to 40-50 million EUR, reaching in the last year 0.10% of GNI. The commitment of 0.33% of GNI in 2017 (or EUR 140 million) is difficult to achieve, but this is characteristic for all new EU member states – none of them is even close to implementing its ODA commitments under the EU Development Cooperation Policy.

According to the Midterm Development and Humanitarian Assistance Program 2013-2015 Bulgaria participates at multilateral and bilateral level, directing its development assistance to countries and regions of priority for the country's foreign policy. In their determination, one takes into account the traditional historical, economic and cultural ties, geographical proximity and political will for cooperation, as well as the existence of specific aid capacities and the EU Enlargement and Neighbourhood Policies. In this regard, as priorities for Bulgaria the Program identifies the Western Balkans, the Black Sea region, the Middle East and North Africa as well as the post-conflict reconstruction countries and Sub-Saharan African countries.

So far, Bulgarian participation in International Development Cooperation is related mostly to financial commitments and capacity building for the conduction of a Bulgarian development policy. There are some positive results in this respect, but in general the country is failing to harness the potential of its participation in International Development Cooperation. To this end, a clear and long-term national development policy should be developed and implemented, the institutional capacity to provide assistance should be improved and the necessary support by the Bulgarian public for full participation in International Development Cooperation should be raised.

In order to support the drawing of recommendations on the strategic priorities which Bulgaria has to set in its participation in the International Development Cooperation, and more specifically – in granting and allocating Official Development Assistance, one must summarise insights and concepts of economic theory dealing with development assistance, mainly regarding the rationale and the potential economic gains of development assistance donors as well as the existence, direction and strength of the link between the dynamics and volume of ODA and international trade flows.

The Relation between Development Aid and International Trade: a Literature Review

In economic development literature on development aid there is a trend for studying both the effects of aid, as well as the rationale for its granting. These issues are interrelated as the reasons for granting aid are often affecting its allocation as well. Many studies show that both development aid and international trade have a positive impact on economic growth and development. This issue will not be discussed here as the study focuses on the economic gains of aid allocation. In

this regard, there is strong empirical evidence that in the case of OECD donors the volumes of bilateral aid disbursements are significantly influenced by bilateral trade between donors.

For a statistical link to exist, aid must culminate in a higher level of donor exports to the recipient than would be the case without aid, or alternatively, the bilateral trade – in particular donor exports, must result in a higher level of aid to the partner than would otherwise be the case.

As noted in many studies of development aid there are many reasons why one might expect to observe a correlation between aid and trade flows from a donor to a particular recipient. In the case of tied aid the link is obvious – the granting of aid is contingent on purchasing goods from the donor. More generally, aid often is given to countries which have strong trading ties with the donor (e.g. ex-colonies). On the other hand, aid could create trade dependency, where recipients purchase imports from donors granting them large amounts of aid because the aid is considered contingent on the imports. Aid could be regarded also as trade creating – it contributes to economic growth in the recipient country that generates a subsequent increase in donor exports to the recipient. Such trade creation benefits the donor, and can be a strong factor in maintaining or increasing the value of aid flows.

Many studies try to identify whether donors tend to allow political and economic goals to influence their aid allocation decisions or whether they instead select recipients on the basis of their objective development needs (Berthélemy, 2006; Fleck and Kilby, 2006; Lewis, 2003; Maizels and Nissanke, 1984; Neumayer, 2003; Schraeder et al., 1998). While existing work suggests that the motives underlying aid decisions are mixed, these studies point to a range of donor interests, such as the maintenance of colonial ties, military alliances, the protection of spheres of influence, and trade and investment ties, as central determinants of patterns of aid flows. (Bueno de Mesquita and Smith 2009; Burnside and Dollar 2000; Dunning 2004; Stone 2008; Thacker 1999).

Most researchers regard the commercial dimension of national interest as a main part of the motivation of donors for aid distribution. National interest of donor countries, reflected in trade ties of the donors with the developing world, represents a consistent benchmark to evaluate the self-interested attributes of aid allocations because the meaning of the concept itself does not vary across donors or over time. One could identify three main motives for donors disburse foreign aid to their trading partners: strengthening export markets, supporting the implantation of donor firms in recipient economies and maintaining access to essential imports. (Lundsgaarde et al., 2010). The relevance of commercial interests as a determinant of aid flows has not been neglected entirely by aid researchers. Schraeder et al. (1998) investigate the influence of commercial interests over aid decisions in their study of aid allocations from four donor countries to African recipients between 1980 and 1989, for instance, while Neumayer (2003) includes trade ties as a covariate in his recent analysis of patterns of aid flows between donor–recipient pairs in the post-Cold War period. McGillivray and Morrissey (1998) place the link between trade and aid at the centre of their analysis of aid allocation patterns but restrict their focus to East Asia.

Aid flows may induce donor exports either because of the general economic effects on the recipient, or because aid is directly linked to trade, or because it reinforces bilateral economic and political links, or a combination of all three. However, according to Lloyd et al. (1998) each of the reasons linking aid to trade can operate in reverse, such that aid reduces trade.

Aid is often linked to the implementation of structural economic reforms (Burnside and Dollar 2000; Easterly 2002; Milner and Kubota 2005), especially the liberalisation of foreign trade regimes (Morrissey, 1995). Trade liberalisation could affect donor's exports, as reduction of trade barriers increases the opportunities for market access in developing countries. Moreover there are various other economic mechanisms though which development assistance could foster bilateral trade – mostly regarding the increase of the import capacity of the recipient country through supporting its economic development (Geddes 1994; Haggard and Webb 1994; Nsouli, Rached, and Funke 2005; Rodrik 1992, 1996; Weyland 2002).

The most direct link between aid and trade is formal tying, where the provision of aid is dependent upon the recipient purchasing goods from the donor – this usually means that aid is provided in the form of goods and services procured in the donor country, thus aid itself is trade (donor exports). In this way aid is used as an instrument of trade policy (Morrissey, 1993). There is a related argument that aid generates political goodwill, from the recipient towards the donor, such that the recipient may feel more disposed, if not obliged, to purchase goods from the donor (Lloyd et al, 1998).

On the other hand there is a lot of evidence on the negative effects of tied aid. Empirical studies have shown that exports provided under tied aid are overpriced, compared to prevailing world prices, by between 10 and 40 percent (Jepma, 1991). Moreover, the goods offered are of low priority to the recipient, are excessively capital-intensive, are highly dependent on Western technologies and are import biased (Jepma, 1989, p. 10). There is also an argument that tying has a detrimental economic impact on donors as tied aid often supports inefficient industries (Morrissey, et al, 1992).

A less direct form of tying is informal, where donors direct aid towards projects, goods or countries in which its own industries have a strong competitive advantage (Lloyd et al, 1998). In practice in this case it is difficult to distinguish resulting trade from competitive advantage. There is a related argument that aid generates political goodwill, from the recipient towards the donor, such that the recipient may feel more disposed, if not obliged, to purchase goods from the donor (Morrissey, 1991).

Even in the absence of tied aid there are ways in which aid can induce recipient dependence on donors for the supply of goods and services – for example, where equipment and machinery are involved, replacement parts are often only available in the original source country (Lloyd et al, 1998). Another example is food aid – some researchers claim that food aid distorts the allocation of resources in recipient countries away from the production of food, thus it distorts domestic consumption patterns and prolongs the very shortages it is intended to overcome (Maxwell and Singer, 1977).

The view that trade can lead to aid (i.e. there is a reverse relation) is generally attributed to effects of aid allocation policies of donors – trade can lead to further aid if donors give preference in the allocation of their aid to countries with which they have the greatest commercial links (Morrissey et al, 1992); when the donor is “rewarding” the recipient for purchasing its exports (McGillivray and White, 1993); when the donor is seeking to consolidate and/or expand its market in the country through the expectation that aid will have a trade-inducing effect (Lloyd et al., 1998).

Cross section data also indicates cases where a negative relationship between aid and donor exports may be observed. A donor may well decide to pursue a more aggressive and indeed risky strategy; rather than focusing on established export markets, it could instead use aid to promote export ties in those countries which currently are lesser markets (McGillivray and Oczkowski, 1992).

There are many empirical studies focused on finding a statistical linking between development aid and international trade (table 1). Despite the claim of most researchers (both in theoretical as well as in empirical studies) that a link between aid and trade actually exists, the fact that many forms of relation are possible represents a problem with existing empirical work: as most studies limit attention to one (or a sub-set) of these possible cases, one cannot draw general conclusions.

A recent empirical study analysing the patterns and dynamics of development aid and international trade of the EU and China with Sub-Saharan African countries (Nestorov et al., 2017) shows that there is no evidence for a causal relation between EU’s development aid (both ODA and TOF) and international trade (both total trade, imports and exports). This is valid both for Africa as a whole and for Sub-Saharan Africa. On the other hand, in the case of China “trade creates aid” – around 55% of the change of aid being a result of changes in foreign trade, the casual relation being stronger for exports.

Table 1

Does the volume of development aid depend on the volume of foreign trade – the answer of different empirical studies (1968-2017)

Study	Donor	Period under review	Recipient	Answer
Levitt (1968)	USA	1963	LDC sample	Yes
Wittkopf (1972)	France	1964	LDC sample	Yes
		1967		No
	Germany	1961		No
		1964		No
		1967		No
	Great Britain	1964		Yes
		1967		Yes
	USA	1961		Yes
		1964		No
		1967		No
Dudley & Montmarquette (1976)	Belgium	1970	LDC sample	Yes
	Canada			No
	France			Yes
	Germany			Yes
	Italy			Yes
	Switzerland			No
	Great Britain			Yes
	USA			Yes
McKinlay & Little (1978a)	France	1968	LDC sample	No
		1969-70		Yes
		1967	Former colonies sample	Yes
		1964-66		Yes
		1968-70		Yes
McKinlay & Little (1978b)	Great Britain	1960	LDC sample	Yes
		1961-70		Yes
McKinlay & Little (1979)	USA	1962, 1970	LDC sample	Yes
		1960-61, 1963-69		No
Maizels & Nissanke (1984)	France	1969-70	LDC sample (former colonies excluded)	Yes
		1978-80		Yes
	Germany	1969-70	LDC sample	No
		1978-80		No
	Japan	1969-70	LDC sample	Yes
		1978-80		Yes
	Great Britain	1969-70	LDC sample	Yes
		1978-80		Yes
	USA	1969-70	LDC sample	Yes
		1978-80		No
Bowles (1987)	Great Britain	1970-81	LDC sample	Yes
Bowles (1989)	EC (bilateral)	1975-81	LDC sample	No
McGillivray & Oczkowski (1991)	Australia	1980-86	LDC sample	Yes
Tsoutsoplides (1991)	EC (bilateral)	1975-80	LDC sample	Yes
	EC (multilateral)			Yes
Grilli & Reiss (1992)	EC (bilateral)	1971, 1980, 1988	ACP LDC sample	Yes
	EC (multilateral)	1971		Yes
	EC (multilateral)	1980, 1988		No
McGillivray & Oczkowski (1992)	Great Britain	1980, 1982, 1983	LDC sample	Yes
		1986, 1987		Yes
		1981, 1984, 1985		No
Gounder (1994a)	Australia	1988, 1990	LDC sample	Yes
		1987, 1989, 1991		No
Gounder (1994b)	Australia	1988, 1989, 1990, 1991	SE Asia LDC sample	Yes
Nestorov & Marinov (2017)	EU	2000-2012	Africa, Sub-Saharan Africa	No
	China			Yes

Source: compiled by the author based on Lloyd et al., 1998

Future Directions to Be Approached

In order to draw own results on the link between development aid and international trade through statistical approaches measuring dependencies, the link between the volume and dynamics of Official Development Assistance and foreign trade flows wilt be tested for a set of selected EU countries, Members of the Development Assistance Committee of the Organisation for Economic Cooperation and Development and a set of selected Least Developed Sub-Saharan African countries. The study will be based on the following limitations:

- The time-frame of the study is 2003-2015, encompassing the new trade relations framework between the EU and African countries.
- Study of development aid will be limited to ODA flows only. Within them it will analyses the volume of gross and net disbursements, not taking into account the relieving and postponing of external debt and the capital investments in public enterprises.
- The member-states of DAC by the OECD are chosen as subject of the econometric analysis as on one hand as members of the OECD they have the obligation to report strictly and uniformly the data on granted by them ODA, while on the other they are the most active ODA donors. Five countries which are similar to Bulgaria in terms of size and openness of the economy, volume of trade flows and commitments to granting development assistance will be selected among DAC members who are also members of the DAC depending on data availability.
- Least developed countries are selected as they receive over 50% of all ODA. The region of Sub-Saharan Africa is selected as on one hand the countries there are among the recipients of the highest volumes of ODA in the world, while on the other hand it is included as a priority region both in the Bulgarian Midterm Program for Development Assistance as well as in the European Development Cooperation Policy. Up to 10 countries which have are among Bulgaria's main trade partners in the region will be selected depending on data availability.
- The specific statistical tools (e.g. cross-correlation, Granger causality, Engle-Granger cointegration, Johasen cointegration) to assess the relation between development aid and foreign trade depend on their results, thus they will be identified in the course of the research work according to their applicability to the available data.

Thus the study will assess the existence, direction and strength of the link between the dynamics and volume of development aid and international trade flows between the EU member-states which are also members of DAC on one hand, and the LDCs in Sub-Saharan Africa – on the other which will support the drawing of recommendations on the strategic priorities which Bulgaria has to set in its participation in the International Development Cooperation, and more specifically – in granting and allocating Official Development Assistance.

Conclusions

Although the aid allocation literature does not provide a consensus on the impact of trade on aid flows, several general types of aid-trade links may exist – first, that no relationship exists at all; second, that trade is a determinant of aid (donors grant more aid to those recipients that import more from them); third, that aid impacts on trade ('aid causes trade'); fourth, that the link between trade and aid is bi-directional (aid and trade form parts of a mutually reinforcing cycle - the presence of one increases the likelihood of the other); and last but not least, that a third common factor is responsible for the observed temporal correlation between aid and trade.

The fact that many forms of relation are possible represents a problem with existing empirical work: as most studies limit attention to one (or a sub-set) of these possible cases, limits the applicability of those studies. Despite the claim of most researchers (both in theoretical as well as in empirical studies) that a link between aid and trade actually exists the literature still cannot draw a general conclusion on its specific features. Thus the further study of this link in EU member-states which are similar to Bulgaria in terms of size and openness of the economy, volume of trade flows and commitments to granting development assistance would allow the formulation of justified recommendations on the strategic priorities which Bulgaria has to set in its participation in the International Development Cooperation.

Bibliography

Berthélemy, J.-C. 2006. Bilateral Donors' Interest v. Recipients' Development Motives in Aid Allocation: Do All Donors Behave the Same? Review of Development Economics 10 (2), pp. 179–194.

Bountagkidis, K. Fragkos, K. and C. Frangos. 2015. EU Development Aid towards Sub-Saharan Africa: Exploring the Normative Principle. Social sciences 2015, 4, 85–116; doi:10.3390/socsci4010085, ISSN 2076-0760.

Bowles, P. 1987. The Political Economy of UK Foreign Aid, International Review of Applied Economics, 1: 2, 225-240.

Bowles, P. 1989. Recipient Needs and Donor Interests in the Allocation of EEC Aid, Canadian Journal of Development Studies, 10, 7-19.

Bueno de Mesquita, B. and A. Smith. 2009. A Political Economy of Aid. International Organization 63 (2): 309-340.

Burnside, C. and D. Dollar. 2000. Aid, Policies, and Growth. American Economic Review 90 (4): 847–68.

Dudley, L. and C. Montmarquette. 1976. A Model of the Supply of Bilateral Foreign Aid, American Economic Review, 66: 1, 132-142.

Dunning, T. 2004. Conditioning the Effects of Aid: Cold War Politics, Donor Credibility, and Democracy in Africa. International Organization 58 (2): 409–23.

Easterly, W. 2002. The Elusive Quest for Growth. Cambridge: MIT Press.

Fleck, R. K. and C. Kilby. 2006. How Do Political Changes Influence US Bilateral Aid Allocations? Evidence from Panel Data. Review of Development Economics 10 (2), pp. 210–223.

Geddes, B. 1994. Challenging the Conventional Wisdom. Journal of Democracy 5 (4): 104-118.

Gertcheva, V. 2008. Bulgarian Official Development Assistance and Peacebuilding, Initiative for Peacebuilding, http://www.initiativeforpeacebuilding.eu/pdf/Bulgarian_Official_Development_ Assistance _and_Peacebuilding.pdf.

Gounder, R. 1994a. Empirical Results of Aid Motivations: Australia's Bilateral Aid Program, World Development, 22: 1, 99-113.

Gounder, R. 1994b. Australia's Aid to Near Neighbours: Southeast Asia the South Pacific, ASEAN Economic Bulletin, 10: 3, 316-328.

Grilli, E. and M. Riess. 1992.EC Aid to Associated Countries: Distribution and Determinants, Weltwirtschaftliches Archiv, 128: 2, 202-220.

Haggard, S. and . B. Webb (eds). 1994. Voting for Reform: Democracy, Political Liberalization, and Economic Adjustment. New York: Oxford University Press.

Jepma, C. 1991. EC-wide Untying. International Foundation for Development Economics and Department of Economics, University of Groeningen.

Kaberuka, D. 2011. Development and aid in Africa: What have we learned from the past 50 years? In OECD, Development Cooperation Report 2011: 50th Anniversary Edition, OECD Publishing.

Kostova, A. 2015. Development policy as an opportunity for Bulgarian foreign policy. Diplomanc Journal, electronic issue, 14.01.2015 r., http://diplomacy.bg/archives/1376?lang=BG (in Bulgarian).

Levitt, M.S. 1968. The Allocation of Economic Aid in Practice, The Manchester School of Economics and Social Studies, 6:. 2, 131-147.

Lewis, T. L. 2003. Environmental Aid: Driven by Recipient Need or Donor Interests? Social Science Quarterly 84 (1), pp. 144–161.

Lloyd, T., McGillivray, M., Morrissey, O. and R. Osei. 1998. Investigating the Relationship Between Aid and Trade Flows. CREDIT Research Paper 98/10. Centre for Research in Economic Development and International Trade, University of Nottingham.

Lundsgaarde, E., Breunig, C. and A. Prakash. 2010. Instrumental Philanthropy: Trade and the Allocation of Foreign Aid. Canadian Journal of Political Science 43:3, September 2010, pp. 733–761.

Maizels, A. and M. Nissanke. 1984. Motivations for Aid to Developing Countries, World Development, 12: 9, 879-900.

Maxwell, S. and H. W. Singer. 1979. Food Aid to Developing Countries: A Survey. World Development, Vol. 7, pp. 225-247.

McGillavray, M. and O. Morrissey. 1998. Aid and Trade Relationships in East Asia. The World Economy 22 (7), pp. 981–995.

McGillivray, M. and E. Oczkowski. 1991. Modelling the Allocation of Australian Bilateral Aid: A Two-part Sample Selection Approach, Economic Record, 67: 197, 147-152.

McGillivray, M. and E. Oczkowski. 1992. A two-part sample selection model of British bilateral foreign aid allocation, Applied Economics, 24, 1311-1319.

McGillivray, M. and H. White. 1993. Explanatory Studies of Aid Allocation among Developing Contries. The Hague: ISS Working Paper No. 148.

McKinlay, R.D. and R. Little. 1978a. The French Aid Relationship: A Foreign Policy Model of the Distribution of French Bilateral Aid, 1964-70, Development and Change, 9, 459-78.

McKinlay, R.D. and R. Little. 1978b. A Foreign Policy Model of the Distribution of British Bilateral Aid, 1960-70, British Journal of Political Science, 8, 313-332.

McKinlay, R.D. and R. Little. 1979. The US Aid Relationship: A Test of the Recipient Need and Donor Interest Models, Political Studies, 27: 2, 236-250.

Milanov, M. 2009. Financing development as a process in International Development Cooperation and Bulgaria's place in it. In: International Development Cooperation and Bulgarian Participation in It. (in Bulgarian).

Milner, Нл V. and K. Kubota. 2005. Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries. International Organization 59 (1): 107-43.

Morrissey, O. 1993. The Mixing of Aid and Trade Policies', The World Economy, 16:1, pp. 69-84.

Morrissey, O. 1995. Politics and Economic Policy Reform: Trade Liberalisation in Sub-Saharan Africa, Journal of International Development, 7: 4, 599-618.

Morrissey, O., B. Smith and E. Horesh. 1992. British Aid and International Trade. Buckingham: Open University Press.

Nestorov, N. and E. Marinov. 2017. Development Aid and International Trade in Sub-Saharan Africa: EU vs. China. In: Wamboye, E. and E. Tiruneh (eds.) "Foreign Capital Flows and Economic Development in Africa: The Impact of BRICS versus OECD", Palgrave Macmillan, New York, USA, pp. 271-297, ISBN 978-1-137-53496-5.

Neumayer, E. 2003. The Pattern of Aid Giving. London: Routledge.

Nowak-Lehmann, F., Martínez-Zarzoso, I., Cardozo, A., Herzer, D. and S. Klasen. 2010. Linking Foreign Aid and Recipient Countries' Exports: Are there Differences Between Regions of the Developing World? Discussion Paper No., Ibero-America Institute, University of Göttingen.

Nsouli, S. M., M. Rached and N. Funke. 2005. The Speed of Adjustment and the Sequencing of Economic Reforms. International Journal of Social Economics 32 (9): 740-766.

Osborne, E. 2002. Rethinking Foreign Aid. Cato Journal, Vol. 22, No. 2 (Fall 2002).

Qian N. 2014. Making Progress on Foreign Aid. Annu. Rev. Econ. 3: Submitted. Doi:10.1146/annurev-economics-080614-115553.

Rodrik, D. 1992. The Limits of Trade Policy Reform in Developing Countries. Journal of Economic Perspectives 6 (1): 87-105.

Rodrik, D. 1996. Understanding Economic Reform. Journal of Economic Literature 34 (1): 9-41.

Schraeder, P.J., Hook, S.W. and B. Taylor. 1998. Clarifying the Foreign Aid Puzzle: A Comparison of American, Japanese, French, and Swedish Aid Flows. World Politics 50 (2), pp. 294–323.

Thacker, S. C. 1999. The High Politics of IMF Lending. World Politics 52 (1): 38-75.

Tsoutsoplides, C. 1991. The Determinants of the Geographical Allocation of EC Aid to the Developing countries, Applied Economics, 23, 47-658.

Weyland, K. 2002. The Politics of Market Reform in Fragile Democracies: Argentina, Brazil, Peru and Venezuela. Princeton: Princeton University Press.

Wittkopf, E.R. 1972. Western Bilateral Aid Allocations: A Comparative Study of Recipient State Attributes and Aid Received, Sage, Beverly Hills.

CORPORATE, AND PERSONAL FINANCE

ENTERPRISE VALUE MANAGEMENT IN CRISIS SITUATION: ACCOUNTING AND FINANCIAL APPROACHES

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Abstract

Economical instability of Moldova Republic, on the background of global financial and geopolitical crisis and sanction policies imposed by external partners, triggers the necessity of an integrated approach for value-creating processes for domestic enterprises and the development of new methods and strategies in enterprise value management, to help find benchmarks for maintaining and increasing value in times of crisis. The research identifies the essence of enterprise value management in a crisis situation and a model of enterprise value management in a crisis situation is proposed.

The author of research aimed to determine which and how modern methods of enterprise evaluation can be used to diagnose the situation in which an enterprise risks to enter in crisis and to destroy its value.

It highlights the peculiarities of enterprise value management in a crisis situation through the stage of the life cycle of the enterprise and in terms of two main approaches: accounting and financial.

Keywords: enterprise value, value-based management, financial crisis

JEL Classification: G32

Introduction

Economical instability of Moldova Republic, on the background of global financial and geopolitical crisis and sanction policies imposed by external partners, triggers the necessity of an integrated approach for value-creating processes for domestic enterprises and the development of new methods and strategies in enterprise value management, to help find benchmarks for maintaining and increasing value in times of crisis.

The 2008 global crisis has caused quite serious financial difficulties for many indigenous businesses (decline in business activity, declining production). Currently, not only small and medium-sized businesses, but also large companies are facing financial difficulties.

The negative impact of the financial and economic crisis on the short-term results of the domestic enterprises is manifested by the recording of the financial losses, the increase of the financial debts, which obviously leads to the reduction of the value of the enterprise. This can be exemplified on the basis of the 2008 and 2015 crisis observations, which have been manifested both by the reduction in the price of securities of the listed companies on the Moldova Stock Exchange. The results of the financial reports of the public enterprises have accepted depreciation of different types of assets, so that the investment attractiveness of enterprises, and therefore their value decreases.

Description of the Problem

In the age of crisis, the problem of business survival arises. This problem is resolved by the rational use of financial resources to optimize cost structure, property, equity and debt. In the face of many enterprises, the problem of the lack of financial resources and high costs related to the attracted capital service arises. Existing approaches to asset management, capital and finance have not ensured the optimization of capital structure and optimal cash-flow management. Despite the apparent development of financial strategies in economic science, many businesses, especially small and medium-sized ones, have been on the verge of bankruptcy.

The cause of the problems for most businesses is not the crisis itself, but the inadequate management decisions previously taken, possibly many years before the crisis.

The practice of developed countries demonstrates that value has a number of unique properties that make it the best decision-making criterion for crisis management and, in a broader sense, the

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best criterion for assessing the success of enterprise management in general. In a correct use, the value criterion allows for effective decisions that will improve the long-term economic situation of the enterprise.

We believe that recent events have underlined the value of business-driven enterprise value. Those who assimilated him pretty well, currently have important advantages. In particular, during the crisis, they focused better on the business environment because they were driven not only by the information provided by the market but also by the results of their own financial analysis and modeling of enterprise value.

In the literature, the issue of managing the value of the enterprise in a crisis situation is practically not approached, the possibilities of using the value of the enterprise in the anti-crisis management, the merger and the takeover of the enterprises are investigated [3, 5, 6], and some sources address the given issue through the management and the assessment of insolvent enterprises at different stages of the insolvency process [7].

Results Obtained

1. The Value Management Model of the Crisis

The events of the international financial crisis have shown that the market price for listed companies and the transaction price for private enterprises can not serve as a benchmark for crisis management decisions. However, the limited capacity of the market to determine the internal value of the enterprise does not question the timeliness of the value-based approach. On the contrary, the orientation towards the internal value for existing enterprises under disproportionate prices is a well-grounded approach to managing the business in times of crisis.

By synthesizing the bibliographic sources in the field [1, 3, 4, 5], the author identified the essence of enterprise value management in a crisis situation characterized by the following:

1. The main indicator of the business situation in times of crisis is the internal value for the owner. It is very important to determine the value of the business, regardless of the market and investors' reaction and behavior. As the crisis progresses, we can reevaluate the enterprise to find out the dynamics and analysis of the causes that have generated changes in value;
2. In times of crisis, the use of enterprise value management concepts makes it possible to make decisions that are not obvious. For example, under normal circumstances, loss of market share can be seen as a defeat, and in times of crisis, a conscious reduction in activity can lead to an increase in value;
3. Essential changes in the external environment require us to give weight to value factors. It will determine the value factors register and the impact of each factor on the value of the enterprise, after which focus attention on the most important ones.
4. Modeling possible changes in value factors allows us to assess the risks and verify the company's safety margin;
5. If the company resists the safety test, we can say that its strategic possibilities not only allow the crisis to pass, but also make a leap as the crisis ends. It is necessary to predict the evolution of value factors during the development of the crisis.

Anticrisis management in the context of enterprise value management presents the creation of a system of principles and methods of elaboration and realization of a complex of managerial decisions aimed at preventing and overcoming the reduction of the value of the enterprise and minimizing the negative consequences on the enterprise.

The primary purpose of enterprise value management in a crisis situation is to recover the financial condition of the enterprise and minimize the value of the enterprise, caused by financial crises.

According to the author, in the process of achieving its main purpose, the management of the value of the enterprise in a crisis situation has to achieve the following basic tasks (Figure 1):

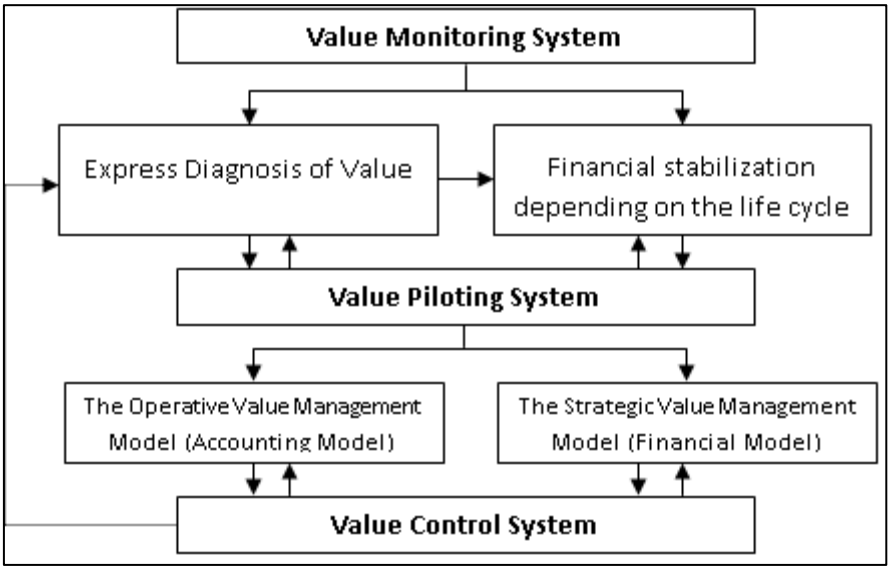
1. Implementing a value monitoring system, which will signal the enterprise's management of the evolution of value and which will be achieved through:
   - the emergency diagnosis of the crisis;
   - balance the domestic financial situation with the life cycle.

2.Implementing a value piloting system that will be achieved through:
- Operative value management (short-term);
- Strategic value management (long-term).

3. Implementing the value control system.

Based on the above mentioned task, we believe that they can be the basis of the value management system and we recommend the following model of the value management system.

Figure 1 - Business Value Management System in Crisis Situation


Value Monitoring System
Express Diagnosis of Value
Financial stabilization depending on the life cycle
Value Piloting System
The Operative Value Management Model (Accounting Model)
The Strategic Value Management Model (Financial Model)
Value Control System

Source: elaborated by the author.

By addressing the issue of managing the value of the enterprise in overcoming the crisis situation, *first of all* we consider it important to establish a *crisis diagnosis mechanism*, namely the situation in which the company starts to lose its value, which is the premature signal of crisis of the enterprise.

2. Diagnosing the Crisis of Value

In order to solve the given problem, we propose to diagnose the process of entering the crisis enterprise by using the enterprise assessment tools (methods). Our approach is based on the fact that the current (internal) value represents the initial stage, and at the same time the point of control (landmark) in the anti-crisis management. Namely the evolution of the fundamental value signals incipient and prematurely entry of the enterprise in crisis.

As mentioned in previous research [2], the modern enterprise evaluation tool is based on three methods: the expenditure, revenue and market (comparative) method.

We believe that the basis of each valuation method is the fundamental value-creation signals that we have examined in terms of growth models of enterprise value. In our understanding of the basis of the expenditure method is the discrete model of the increase in the value of the enterprise, but in general, the value of the enterprise itself is estimated based on the size of the capital and reflects the current prospects of the enterprise. The basis of the revenue method is the model of continuous value growth, and the value of the enterprise expands through the mechanism of updating future cash-flows and reflects a long-term vision of the enterprise's development. The theoretical basis of the comparative method is the general-scientific method of the comparative analysis, and the basic premise of its application is the existence of a developed financial market.

As a result of the systematization of modern enterprise valuation methods and various criteria for value creation, the author of this research determined the scope of their use in detecting the situation of entering the enterprise in crisis and destroying the value of the enterprise.

Table 1

Diagnosis of the crisis situation based on the enterprise evaluation methods

No.	Estimated value based on different methods	Conclusions
1.	$V_p > V_v$ $V_p > V_c$	The enterprise is growing, there is an increased investment demand on the enterprise, the development potential is undervalued, the high liquidity of the shares and other securities
2.	$V_p < V_v$ $V_p < V_c$	Enterprise is declining, low investment demand on the enterprise, low liquidity of securities
3.	$V_v < V_c$	Existence of signs of worsening of the financial situation and orientation towards short-term development perspectives
4.	$V_v > V_c$	The existence of signs of improvement of the financial situation and the appearance of the long-term development prospects of the enterprise
unde V_p – the value of the enterprise obtained on the basis of the comparative (market) method; V_v – the value of the enterprise obtained on the basis of the revenue method; V_c – the value of the enterprise obtained on the basis of the expense.		

Source: elaborated by the author.

The analysis of paragraphs 1 and 2 of table 1 determines the appropriate time to sell the business on the basis of a comparison of the enterprise's market value with the basic amount.

The analysis of points 3 and 4 of table 1 sets out the prerequisites for addressing the financial crisis of the enterprise based on an indicator - the enterprise value indicator, its dynamics and the ratio between value indicators estimated on the basis of the discrete and continuous growth model formulas.

Based on the obtained results, namely establishing the mechanism of the interdependence between the enterprise's value and the financial state of the enterprise, by which the improvement of the financial situation of the enterprise is explained by the change of the factors of the value of the discrete and continuous growth model, the author solves the problem of creating the premature diagnostic model of the entry of the company into crisis and the loss of value in the near future.

3. Particularities of Financial Stabilization at Different Stages of the Life Cycle

The second step is the *financial stabilization of the enterprise* in order to monitor the value of the enterprise in a crisis situation. But taking into account that financial crises can be triggered at different stages of the life cycle, we consider it important that the financial stabilization process contains as core tools the management of key value impact indicators specific to that life cycle stage.

Manifesting at any stage of the enterprise's lifecycle, the financial crisis hinders the development of the enterprise, substantially increasing the life cycle stage. Characterizing this particularity of the financial crisis, it should be noted that its manifestation at every stage of the life cycle has its own peculiarities, which must be taken into account in the process of financial stabilization of the enterprise's crisis management value.

The business lifecycle for different countries and different industries is diverse, but the life cycle curve for all businesses is the same. The life cycle curve consists of different stages describing the company's dependence on internal and external factors occurring over a certain period of time. Each stage can be attributed to financial factors that influence the value of the enterprise, which were generalized in table 1.

In the framework of the company's financial stabilization, we propose to examine the enterprise based on three financial dimensions: liquidity, risk and value.

The analysis of the enterprise at different stages of the life cycle through the financial component will allow us to solve two tasks: to detect the changes that are characteristic of each financial dimension and to introduce a new aspect in the issue of the enterprise movement from one stage to another in the life cycle.

The start-up phase is characterized by the creation of the enterprise, therefore at this stage the value of the enterprise is highly conditioned by the forces outside it, the financial activity being just a beginning. However, from the financial point of view, the value of the enterprise at this stage can be defined by the enterprise's net assets (the value of the invested capital).

Table 2

Organizational and financial particularities of the enterprise at different stages of the life cycle.

Stage of life cycle	Financial peculiarities	Organizational features	Dependence on external factors	Dependence on internal factors
Start-up	The high share of borrowed funds, high financial risk, low profitability indicators	Gradual entry into the market, intensive marketing, establishing contracts with suppliers and creditors	Strong	Weak
Growth	Optimal financial risk, high production risk, high profitability indicators	Intensive modernization, increased production quality	Neutral	Neutral
Maturity	Optimal overall risk, high returns, reduction of rotation coefficients of circulating assets	The total employment of all resources, the gradual immobilization of the working capital, the wear and tear of the fixed assets	Weak	Strong
Decline	Total high risk, low returns, rotation and solvency indicators	Poor marketing, loss of trust by suppliers and creditors, resource wear	Strong	Strong

Source: elaborated by the author.

Throughout the start-up phase, the cash-flow of the enterprise from the operational and investment activity is negative, respectively to feed the enterprise with financial means, the enterprise resorts to external financial sources, registering a positive cash-flow from the financial activity. The negative cash-flow in the operational activity is explained by: (1) low efficiency due to low production volumes and the existence of losses; (2) there is still a need for investments in the company's working capital to increase the production volume. Usually, the increase in current assets takes place from the investment of the founder of the business.

Therefore, I believe that at this stage an unusual situation, for which the existence of the financial crisis is characteristic. The crisis enterprise develops on the basis of a determined logic, which contains the following phases:

1. *the crisis of the strategy* - involves special errors in product portfolio decisions, inappropriate industry and competition misconduct, or mistaken positioning of the firm;
2. *crisis of results* - errors in investment activity and minimum return on invested capital;
3. *liquidity crisis* - insufficient financial resources to solve the company's tasks.

The development of the crisis based on the above logic is possible at any stage of the life cycle.

If we are to take into account the particularities of the movement on the trajectory of the life cycle, then we can highlight the particularities in the formation of the sufficiency of financial means at different stages. We will then examine the changes in liquidity as they move to a new stage. Changes analysis will allow to complement the life cycle concept with financial crises, which are generalized in table 2.

On the basis of table 2 data, we see that the following financial crises are characteristic of the launching phase: the liquidity crisis of the enterprise and the liquidity crisis of the owner's capital. The first type of crisis is caused by the disproportion between working capital in cash and the increasing needs of the business. For the owner, the crisis consists in creating a negative free cash-flow, and thus reducing the value of the enterprise.

In order to overcome the liquidity crisis, it is necessary to manage the working capital prudently by correlating the growth rate of current assets with the rising debt ratio, reducing the growth rate of some current assets by using their efficiency and optimizing volumes. The task of management is

to bring the enterprise's operational flow to the area of positive dimensions. Therefore, the key process is *to transform the entrepreneurial energy into a constant cash-flow from the operational activity*.

Table 3

Liquidity and financial crises at different stages of the life cycle

The type of crisis	Start-up	Growth	Maturity	Decline
Business liquidity crisis	Permanent negative CF from operational activity	Periodically negative CF from operational activity	It's not a feature	Periodically negative CF from operational activity
The liquidity crisis of the capital's owner	Permanent negative CF for owners	Periodically negative CF for owners	It's not a feature	Periodically negative CF for owners
Financing crisis	The impossibility of attracting borrowed capital and reducing capital expenditures	Relation between equity and unpaid debt		

Source: elaborated by the author.

In order to manage the value of the enterprise at the start-up stage, particular attention should be paid to liquidity and financial stability indicators. Since this period is characterized by the start of production and the lack of full use of production capacities, it is not rational to make any conclusions based on profitability or rotation indicators. As a rule, at the start-up stage, the share of sources borrowed in the enterprise's liability is important, which increases the financial risk, therefore corporate value management actions will aim to stabilize the financial indicators.

At the growth stage, the basic process consists in *turning the cash-flow into market share*. The entire duration of the stage is disturbed by management crises: the first group of crises leads to the delimitation of the function of the entrepreneurial function management, and the second group is focused on the crash of the entrepreneurial and owner roles. The entrepreneur faces the dilemma of sharing ownership with new investors, because it is necessary to share the control over the company to solve the growth task. Solving the growth burden on account of borrowed capital, but not from the equity account, is confronted with the credibility of the enterprise and the quality of the attracted credit management. Thus, a necessary problem to solve at this stage is *the strategic character of the capital structure*, which is conditioned by:

1. the impact it has on the weighted average cost of capital. The small share of borrowed capital de facto denotes the non-use of cheaper financial resources than its own capital. Respectively, the enterprise has high capital expenditures;
2. the strategic nature of the capital structure shows that attempting to solve growth on loans without attracting new investor-owners leads to the emergence of specific effects linked to the considerable weight of borrowed capital in the capital structure. These effects create barriers to enterprise development, that is to say, related to the selfish investment decisions of management that lead to conflicts of interest between the manager and the owner. Given the large share of the borrowed capital, the manager will either select high-risk investment projects, or refuse to invest in projects with a risk similar to the enterprise. In the first case, the phenomenon of corporate finance has been called the substitution of assets or the change in the risk profile of assets, and in the second it is refused investment or insufficient investment.

At the same time, we tend to mention that with the increase in financial risk, the company's competitive immunity is diminished by stealing funds in servicing loans, to the detriment of investing in development.

The specificity of financial crises at the growth stage consists of:

- changing drivers of the enterprise's liquidity crisis, which is linked to rhythms of growth. Thus high growth rates can lead to the formation of a negative cash-flow from operating activity not because of losses but due to enormous investments in working capital.
- the dilemma of the simultaneous financing of the increase in production volume and the acceleration of investments. The task of growth requires the solution of the issue of capital investment and the acceleration - long-term investment in development.

In order to manage the value of the enterprise at the growth stage, rotation and profitability indicators are of particular importance. The higher the level of these indicators, the higher the value of the enterprise.

The maturity period occurs as a result of the increased use of all the forces of the enterprise, it is manifested through the involvement of all resources (labor, land, production capacities, capital, entrepreneurial skills) and the maximum production, which means effective use and distribution of resources. At this stage, the role of internal factors, namely financial ones, in managing enterprise value is maximal, as external conditions are beneficial to a mature enterprise.

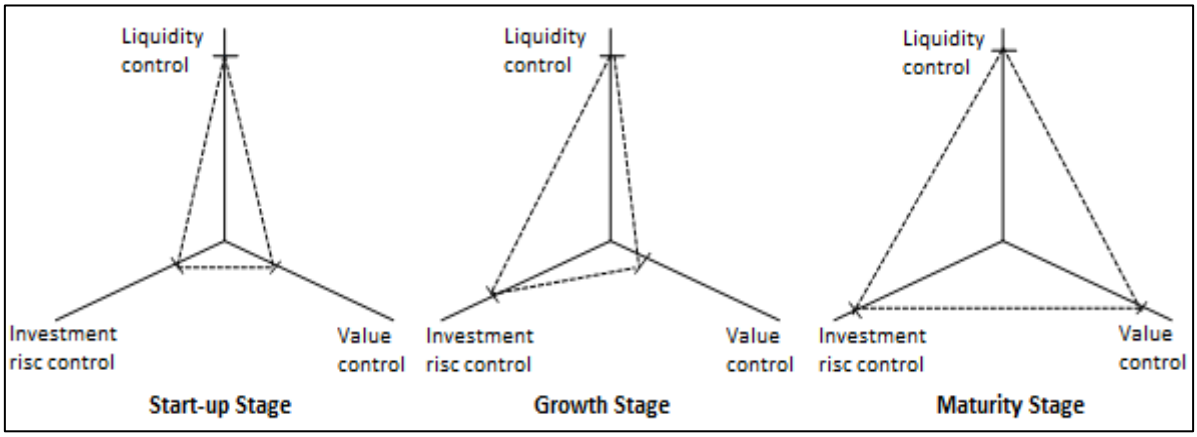
At this stage, the enterprise undergoes a new series of crises, and in a normal development it has a scattered capital structure. Financial liquidity crises are not current. Following the definition given by Boston Consulting Group specialists, the enterprise becomes "milking cow". However, the causes for the onset of financial crises are preserved.

In order to manage the value of the enterprise during the maturity period, particular attention will be paid to the status of returns on sales, return on assets and equity, and the duration of rotation, that is to say the financial component of the stability of the enterprise. But if the indicators of financial and production risk are high, then liquidity and solvency indicators will required to be stabilized. The deviation of the financial indicators from the average values per branch in the maturity period tells us about the financial instability in the operation of the enterprise and if no remedial measures are taken, the enterprise will find itself in a difficult situation.

Among the basic signals certifying the reduction of the financial value of the enterprise in the maturity period may be, first of all, the physical and moral wear and tear of fixed assets, the renewal of which requires the attraction of additional resources, which leads to the increase of the risk indicators of the enterprise. However, if management will strictly plan its actions and move to a new technologically high level, while increasing the volume and quality of goods, then the company will move to a new life cycle in the growth period, thus avoiding the period of decline.

Analyzing the possibilities of applying value management theory to enterprises in crisis, we developed and systematized the vectors to monitor the main financial indicators of enterprises according to the life cycle of the enterprise presented in Figure 2.

Figure 2 - The vectors of decisional efforts at different stages of the life cycle



Source: developed by the author.

For the effective management of the value of the enterprise at different stages of the life cycle, the evaluation criteria must be individual for each step, as they directly depend on the factors that influence the enterprise at a specific stage of life cycle. The company evolving over time is subject to changes in the structure of assets and liabilities, competitiveness, fixed assets and other factors. Thus, depending on the life cycle stage, there are a number of priority directions in enterprise value management, which is based on the specificity of problems that correspond to one or another step.

However, a key issue of contemporary financial management science is to develop and propose solutions to the possibility of obtaining long-term benefits from economic crises. In order to solve the given problem, we need to move to the next stage of the crisis management model, namely the value piloting system.

4. Company Value Pilotage: Accounting and Financial Approaches

In solving the concrete operational tasks and key drivers of enterprise value in a crisis situation, we need to divide and highlight two models of activity analysis. Accounting model is based on traditional treatment for accounting for the company's capital and the results of its use. The second analytical model can be called the financial model, and is developed in accordance with the principles of corporate finance.

The differences in the analysis models of the business are of a principled nature. The contemporary enterprise operates in an environment that has at least three dimensions: the first and the basic one - the risk and the uncertainty; the second - the profitability, which corresponds to the investment risk; third - the liquidity, the ability to rapidly transform into cash-flows the products and the results of the activity. According to all three dimensions, the accounting and financial models differ. Breakdowns begin right beginning of tracking of the benefit of the company. The accounting view is based on the actual operations performed by the enterprise and excludes from the analysis the alternative possibilities of the activity and basically ignores the variants of development.

The successful outcome, based on the logic of the accounting model - is when the income obtained exceeds the recorded expenses. He does not express the basic conception of contemporary economic analysis of creating economic profit. The basic principle of the economic profit analysis takes into consideration the alternatives of placing capital with a certain risk and with an economic effect that corresponds to the risk, or takes into account the lost investment income.

The second essential limitation of the accounting model as an analytical basis for creating the enterprise value management system is that this model does not direct the analysis to the uncertainty of the expected outcome. The accounting model can not answer the question, if the return of the enterprise at the risk of the investor is comparable, it compensates for the risk and that is sufficient for the investor.

The analytical tradition created in the accounting approach focuses on the profit indicators calculated as a tool for expressing the result of the company's business for a period of management. However, to solve management tasks it is necessary to reflect liquidity, so the modern financial model operates with the free cash-flow (FCF) indicators.

The fourth principle of the accounting model implies the nominal treatment of the result expressed in monetary units. There is no investment treatment of the outcome here. This model does not question the size of the expected outcome in the future or the lost income.

The key to the enterprise's financial model is the use of economic profit to reason the decisions and analyze the results of the business. Economic profitability assesses quantitatively whether sufficient cash-flows are created to ensure a satisfactory level of income for the owner of the company. This satisfactory level must be sought in the area of risk analysis. Driving with assets managed without the risk and revenue valuation that would correspond to these risks does not correspond to both the financial management tasks and the strategic management tasks. For this reason, the financial model of the business activity analysis expresses quantitatively the purpose of the development in terms of the capital value of the company's owners.

Conclusions

The value-based management of enterprise concept relies on the paradigm shift of enterprise analysis and alignment with the principles of the financial model for argumentation of key decisions. In our opinion, here is the primary cause that allows us to consider value-based management as an innovation in management. Such a change of paradigm takes place in the developed countries' business environment when companies move to implement this concept. Notwithstanding the fact that Moldovan business has still non-corporative organizational form, and at the moment has formal arguments to ignore the evolution of the shares, such a change of the paradigm is most needed. The insistent need for assimilation of the new analytical apparatus is dictated, in our opinion, in addition to the national specificity. The Moldovan business and its management grew on the basis of the planned economy. In the absence of the alternatives of administrative thinking, it became a managerial tradition, to actually take decisions that do not have

sufficient knowledge of profitability analysis, do not understand the discrepancy of the evaluation of the decisions taken based on the accounting tradition. The tendency, in which an analysis does not correspond to the essence of the competition requirements for the investors' capital, must be interrupted.

Future Directions to Be Approached

As an objective for future research, we consider developing enterprise accounting models, based on accounting indicators, and strategic value management model based on value-based management indicators.

Priority is also the issue of establishing a value control model that would help business management control the value creation processes within the enterprise.

Bibliography

Black A., Wright Ph., Bachman J. E. (1998), In Search of Shareholder Value: Managing the Drivers of Performance. London. Price Waterhouse.

Beşliu I. (2004), Metode şi tehnici utilizate la evaluarea patrimoniului unei societăţi comerciale, Economie şi sociologie, nr. 1, pp. 77-86.

Copeland T., Koller T., Murrin J. (2014), Valuation: Measuring and Managing the Value of Companies. New York. McKinsey & Company, Inc.

Damodaran, Aswath, (2012), Investment Valuation: Tools and Techniques for Determining the Value of any Asset. University Edition. John Wiley & Sons.

Walsh, Ciarian, (1996), The key management ratios. Pitman Publishing.

Грязнова А. Г., Федотова М.А. (2001), Оценка Бизнеса. - Москва, Финансы и статистика.

Чернозуб Олег (2010), Жизнь после кризиса: Стоимостной подход к управлению частной компанией, Альпина Паблишер.

MICROFINANCE IN EUROPE: A SURVEY OF EMN-MFC MEMBERS. REPORT 2014/2015

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Abstract

The 2014-15 EMN-MFC Survey involved a broad range of actors from 22 countries (14 EU Member States). Different regional development paths persist for MFIs in Western and Eastern Europe but also show signs of potential convergence.

Microloan providers use a variety of institutional models to operate in heterogeneous legal and regulatory frameworks: survey participants are primarily non-bank financial institutions (60%) and NGOs (31%) but also include other legal forms (i.e. commercial banks, cooperatives/credit unions, government body).

The European microcredit sector, as depicted by the 149 surveyed MFIs, is diverse, relatively young and dynamic. The majority of respondents (77%) initiated their microlending activities after 1995. Approximately half of the sample started lending activities between 1995-2004.

The vast majority of responding MFIs selected financial inclusion (72%) and job creation (70%) as their primary missions, followed by microenterprise promotion (60%) and social inclusion and poverty reduction (59%). A smaller share of respondents' mission statements (20%) emphasize ethnic minorities and/or immigrant empowerment as well as youth employment (18-25 year) goals.

More than half of the surveyed MFIs are specialised in microlending activities, which contribute to more than 75% of their overall turnover. The total number of paid staff reached 7,076 full-time equivalent employees in 2015, with a substantial share of women staff (56%) and a significant presence of MFIs with less than 10 employees (42%).

Keywords: Microfinance, social and financial exclusion

JEL classification: D53, G21, G23

Microlending Activities: Trends and Outreach

In the period 2014-2015 both the total volume and the number of microloans disbursed showed a growing trend. In 2015, the MFIs surveyed disbursed a total of 552,834 loans (+12% compared to 2014) with a total volume of almost EUR 1.6 billion (+16%).

Overall in 2015, surveyed institutions served 747,265 active borrowers (+13% compared to 2014), and the gross microloan portfolio outstanding reached EUR 2.5 billion (+15%).

The outstanding portfolio is predominantly allocated for business purposes (71% of the total in 2015, 75% in 2014). Nevertheless, the overall distribution is shifting towards personal loans (29% of the total in 2015) due to the fastest grow of number and value of personal microloans disbursed compared to business microloans.

In 2015 the number of active borrowers supported by business microloans reached a total of 402,365. During the year the MFIs surveyed disbursed a total of 220,305 business microloans (+8% compared to 2014) corresponding to a total lending volume of EUR 917 million (+6%).

The survey shows also that a minimum of 207,983 enterprises were supported with business microloans in 2015 with informal businesses and self-employed representing the main clients segment served. The reported number of enterprises supported by the MFI surveyed increased by 9% from 2014 to 2015.

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In terms of personal microloans, in 2015 MFIs surveyed disbursed a total of 332,529 microloans (+15% compared to 2014) corresponding to a total volume of EUR 654 million (+34%). During the same year, the number of active borrowers supported by personal microloans reached a total of 344,900.

Business and personal loan products differ greatly with regards to their terms and conditions. In terms of average characteristics personal microloans are much smaller in size than business microloans (EUR 1,697 vs. EUR 7,947), are offered on shorter terms (30 months vs. 41 months) and are pricier (19% interest rate vs. 10.7%).

Overall, in terms of clients served with both business and personal microloans, surveyed MFIs show a partial commitment to the different target groups proposed in the Survey: rural or urban population, unemployed people or people on welfare, women, ethnic minorities and/or immigrants, youth aged 18-25 years old, disabled people, and financially excluded individuals. MFIs diversify their portfolio risk by serving multiple categories of disadvantaged borrowers (more than 4 on average), each of them representing a limited share of total active borrowers served.

Non-financial Services as a Prevalent Component of European Microfinance Provision

The provision of both financial and non-financial services is a distinctive feature for a large portion of survey participants.

A negligible number of institutions offer financial services beyond business and personal microloans, but additional products include: insurance (4%), current/checking accounts (3%), mortgages (3%), mobile banking (1%), and money transfer services (1%). Two exceptions to this trend are MFIs that provide larger size business loans (>25,000 EUR to microenterprises and SMEs; 42%), and offer savings (18%). Although green microfinance is still considered a young and underdeveloped trend in the European industry, the promotion of environmentally friendly practices through microloans for renewables, energy efficiency and environmentally-friendly activities is currently carried out or planned to start by almost a third of survey respondents.

A large number of the surveyed MFIs also offer non-financial services (58% of participating MFIs). The most common non-financial services include business development services (BDS, 32%), financial education (31%), and mentoring (30%). MFIs mostly internalise the provision of non-financial products and services (88% of the 85 responding MFIs) and mainly deliver them “in person” to their clients (56%) or combine personal and online methods (40%).

Financial Performance: Improving Financial Reporting and Soundness

A substantial share of the surveyed institutions provides reliable financial performance data, which is consistent with the on-going maturity process of the European microfinance sector and signals the gradual development of management information systems and the institutional capacity to adhere to standard reporting requirements.

Financial performance and portfolio quality trends document an increasingly financially viable European microfinance sector despite a few critical, specific cases.

In terms of portfolio quality, surveyed institutions show an overall improvement during the period 2014-2015: PAR30 decreased from 10.4% to 9.7% and write-offs from 2.8% to 2.6%.

The overall financial sustainability as measured by the return on assets (ROA), the return on equity (ROE) and operational self-sufficiency (OSS) is lower for Western MFIs compared to their Eastern counterparts, where most of the operationally sustainable and best financially performing MFIs are located.

Overall the average ROE increased from 2.8% in 2014 to 5.7% in 2015. This trend is primarily driven by MFIs in Eastern countries, where ROE more than doubled (from 3.6% to 7.7%). In Western countries, the average ROE is negative and declining. ROA (3% in 2015) and OSS (90.6% in 2015) have not undergone major changes in the two surveyed years. Only 43 out of 94

institutions are operationally self-sufficient in 2015: only seven of them are from Western European countries.

Bibliography

Adams, D., and Mayoux, L. (2001), “Crossfire”, Small Enterprise Development 12(1), pp. 4-6.

Agier, I., and Szafarz, A. (2013), “Subjectivity in credit allocation to micro-entrepreneurs: evidence from Brazil”, Small Business Economics, 41 pp. 263-75.

Allet, M. (2011), “Measuring the environmental performance of microfinance”, CEB Working Paper N° 11/045.

Armendáriz, B., and Morduch, J. (2010), “The economics of microfinance”, The MIT Press: Cambridge MA.

Armendáriz, B., and Roome, N. (2008), “Gender empowerment in microfinance”, in Sundaresan, S (ed,), Microfinance: Emerging trends and challenges, New York: Edward Elgar Publishing Ltd.

Beck, T., Behr, P., and Guttler, A. (2013), “Gender and banking: Are women better loan officers?”, Review of Finance, 17 pp. 1279–132.

Bending, M., Unterberg, M., and Sarpong, B. (2014), “Overview of the microcredit sector in the European Union”, European Microfinance Network. Botti, F., and Corsi, M. (2011), “Measuring the social performance of microfinance in Europe”, Centre Emile Bernheim Working Paper N° 11/037.

Corbucci, V. (2016), “Personal loans: the forgotten half of microcredit?”, EMN Magazine, May 2016.

Corsi, M., Botti, F., Rondinella, T., and Zacchia, G. (2006), “Women and microfinance in Mediterranean Countries”, Development 49(2), pp. 67-74.

Cull, R., Demirgüc-Kunt, A., and Morduch, J. (2009), “Microfinance Tradeoffs: Regulation, Competition, and Financing”, The World Bank Policy Research Working Paper n. 5086.

Emran, S., Morshed, M., and Stiglitz, J. (2011), “Microfinance and Missing Markets”, MPRA Paper No. 41451.

Enam, F. (2016), “The Features of Microfinance Industry: A Comparison between Eastern and Western Europe”, World Journal of Social Sciences, 6(1), pp. 110 – 120

Forcella, D., and Hudon, M. (2014), “Green Microfinance in Europe”, Journal of Business Ethics, doi: 10.1007/s10551-014-2452-9.

Jayo, B., Rico, S., and Lacalle, M., (2008), “Overview of microcredit sector in European Union 2006-2007”, EMN Working Paper n. 5.

Jayo, B., Gonzalez, A., and Conzett, C. (2010), “Overview of microcredit sector in European Union 2008-2009”, EMN Working Paper n. 6.

Kevane, M., and Wydick, B. (2001), “Microenterprise lending to female entrepreneurs: Sacrificing economic growth for poverty reduction?”, World Development 29(7), pp. 1225-1236.

Khandker, S., Khalily, B., and Khan, Z. (1995), “Grameen Bank: Performance and sustainability”, World Bank Discussion Paper 306.

Kneiding, C., and Kritikos, A. (2007), “Microfinance in Eastern and Western Europe: a comparative analysis”, GfA Discussion Paper No. 09/2007.

Kraemer-Eis, H., and Conforti, A. (2009), “Microfinance in Europe: A market overview”, EIF Research & Market Analysis, Working Paper 2009/001.

Rankin, K. (2002), “Social Capital, Microfinance, and the Politics of Development”, Feminist Economics 8(1), 1-24.

Serra, R., and Botti, F. (2011), “Walking on a tightrope: Balancing MF financial sustainability and poverty orientation in Mali”, ILO Employment Sector Woking Paper No. 90.

TrustLaw (2011), “Creating Jobs in Europe: Legal and Regulatory Frameworks of Microenterprises and Microcredit in Europe”, A TrustLaw publication by the Thomson Reuters Foundation for Adie.

CURRENCY, FINANCIAL SYSTEM AND VIRTUAL SPACE. A MICROECONOMIC APPROACH

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Abstract

The 21st century will be strongly marked by the emergence and development of virtual space. The international financial system will make full use of the benefits of this artefact. What will be more difficult to accept is that everything related to virtual space means collecting, processing, using and storing information, and so! What is currently the subject of many studies under the name of virtual currency is based only on users' trust in a symbol, information.

At the level of companies, the use of this virtual space has many advantages but also risks. This paper attempts to formalize, in the form of additional costs and revenues, the result of companies' actions in the virtual space.

Keywords: virtual space, information, virtual currency

JEL classification: C81, D85,E42

Real Space – Virtual Space

One of man-made products is also virtual space, a space where the only element is information. In the virtual space, only information is exchanged between the different exit points in this space based on specific protocols. Over time, with the introduction of new technologies, the amount of information gathered, processed, used and stored increased exponentially. In this context, in the virtual space one can talk about the economy, a virtual economy only insofar as it accepts as one object only one resource - the information. What is important is the transfer between this virtual space and the real space.

Based on appropriate protocols, "exit" information from virtual space can be transformed into actions to transfer the state of other resources (including financial resources).

At present, based on changes in the structure and mechanism of virtual space operation, a subspace is created autonomously to human action (see the Internet of Things!) And attempts to engage directly with real space without human intervention (subspace of human existence or other subspaces).

As the currency is, virtual space information is an intermediary, often more user-friendly than currency (fewer regulations and depersonalization of transactions).

In this context, the financial system takes full advantage of the existence of such a virtual space, with the direct goal of making financial transactions as profitable as possible.

Gradually, the currency as an instrument of the financial system took on a new form: the electronic currency, which, according to the Law no.127 / 2011, has the following meanings: "the electronic currency is an electronically stored monetary value, including magnetic, representing a claim on the issuer, issued to receive funds for the purpose of performing payment transactions and which is accepted by a person other than the issuer of electronic money. "

Along with electronic money, the virtual currency also appeared, a tool used in financial transactions, only in virtual space, and not regulated by all the world's states.

Electronic coins and virtual coins have common features: they are used in virtual space and are based on user trust.

The use of virtual coins as an alternative means of payment poses potential risks to the financial system, linked to lack of regulation and supervision, money laundering, terrorist financing, price volatility and lack of adequate security.

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"If the authorities do not act preventively, cryptomonas would interconnect with the financial system and could become a threat to financial stability," warned Augustin Carstens, general manager of the Basel International Bailiff.

The money is printed, stripped, and whatever you call it, it's nothing more than just a figure on a computer, because the vast majority of the money we use today is digital.

When talking about cryptomon, we are talking about a purely digital coin. It is created using cryptography, making it almost impossible to counter it. The way Cryptomoneda began to exist is very interesting because it was and is a "rebellious" element in the current financial system that people see as a "bad evil".

Criptomoneda is the practice of creating algorithms developed around computerized hypotheses. Essentially, it is a packet of information, and cryptographic security surrounds it to keep the information secure. According to initiators, these information packs are almost impossible to "break" even the best-paid hackers.

The idea of the "cyberphunk" movement was incredibly innovative, and it is centered on the idea of creating an alternative to the traditional currency that would not require a central authority for its management that would be easy to transfer that would work beyond political limitations and which belongs to people everywhere.

This idea was so strong that it began to materialize back in 1995 when Seth Godin wrote in his book "Presenting Digital Cash"[102] about Jon Matonis (a popular commentator of the Alternative Coins for Forbes Magazine). "Matonis contradicts the fact that what is going to happen in the world of money is nothing more than the birth of a new era of knowledge about industry: developing, securing and managing private coins."

All those who have and have the idea of alternative coins have imagined online information marketing, a place where buyers and sellers can trade anonymously using undetectable digital money, all from state secrets to various reports be bought for the right amount of money.

All the virtual coins up to 4 years ago were based on intermediaries such as banks. And we say 4 years ago, because in 2009 there were the first signs of a change in the field: the emergence of the Bitcoin, a decentralized 100% digital currency.

Bitcoin is not the only example, though. In the last year, other digital coins appeared, some more important, others more jokingly, such as Ethereum, Ripple, Litecoin, Monero.

Bitcoin is a cryptomoneda that was invented in 2009 by an anonymous programmer who used the nickname Satoshi Nakamoto. Why has Bitcoin become so famous in recent years, and why is it so profitable? First of all, Bitcoin is a cryptomonade, a virtual coin that uses blockchain technology. Blockchain is a decentralized technology, the money is transferred in real time from one person to the other, without being controlled by a central system, which does not allow the occurrence of fraud. What can you do with cryptomon? First of all, you can buy goods such as airplane flights, hotel accommodations, cars and much more, because more and more manufacturers and suppliers of goods **trust** in cryptomonades.

Initial public offering of virtual currencies are unregulated operations, similar to the initial public offerings of shares on stock exchanges, through which cryptomonas operators raise funds in exchange for electronic assets. Recently, the SEC, the institution overseeing the US capital market, announced that it had identified a transaction of this kind that fraudulently raised $ 600 million.

Rob Leathern, Product Management Director, did not rule out the possibility of legitimate business with cryptomones in their blog posting on the social media platform.

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[102] *Seth Godin, Presenting Digital Cash, Sams Net Pub., Indiana University, 1995, 256p*

What is Happening at the Microeconomic Level?

In the current age, every business uses virtual space for transactions of all kinds: supplying goods with the object of activity, production, selling products ("online" sales), management.

The problem is how much it costs to use virtual space and what effects.

a. determining the cost of using virtual space

It is obvious that the use of virtual space is directly related to the concept of information, to the value of this information at the firm level.

There are a number of obvious costs, such as:

- for fixed assets: initial investment and depreciation costs for IT equipment and electronic data transfer networks, as well as software for access and security in virtual space (denoted as A)

- concerning the salaries of employees directly involved in collecting, processing, using and storing information (marked with B)

But there are also a number of costs that are not directly apparent and are related to the operation and utilization of the virtual space interface. The only element that can be "commensurated" is the timeline used to ensure and maintain a connection with virtual space (denoted by C).

Under these circumstances, a total cost (CT) of the virtual space link can be formalized using the formula:

$CT= A+B+ \Omega C$

where

A = initial investment and depreciation costs for IT equipment and electronic data transfer networks as well as software for access and security in the virtual space

B = total expenditure with employees directly involved in collecting, processing, using and storing information

C = the timetable used by employees to ensure and maintain a link to virtual space (without employees directly involved in collecting, processing, using and storing information)

Ω = average cost paid by the firm for a time unit C

b. determining revenues from using virtual space

For companies, turnover can be a source

a. directly:

- "online" sales (V_o)

b. indirectly:

- by increasing the number of transactions (number of sales) V_{t1}

$V_{t1} = (N_{SP}-N_t) * p$

where

N_{sp} = number of sales using the benefits of virtual space

N_t = number of sales traditionally

p = average price of the products offered by the firm

- by reducing trading time (V_{t2})

$V_{t2}=(T_t-T_{sp})*N_{sp}*p$

Where

T_t = time used by the firm to trade a sales traditionally

T_{sp} = the timeline used by the firm to trade a sales using virtual space

N_{sp} = number of sales using the benefits of virtual space

p = average price of the products offered by the firm

- through a more effective creative (advertising in virtual space and network effect, respectively V_{t3})

$V_{t3}= (V_{spr}-V_{tr})$

Where

V_{spr} = additional revenue earned through the creative in the virtual space

V_{tr} = additional earnings earned by advertising in real space

c. Determining benefits from using virtual space

Of course, the benefit from using virtual space (Bsp) can be determined directly as follows:

$B_{sp}=V_o+V_{t1}+V_{t2}+V_{t3}-C_t$

Where

V_o = sales "online"

V_{t1} = additional sales due to the increase in the number of transactions

V_{t2} = additional sales due to shorter trading time

V_{t3} = additional sales as a result of a more efficient advertising (advertise in virtual space and network effect

C_t = total cost of the virtual space link

Conclusions

Of course, some of the costs associated with the use of virtual space can not be formally measured (such as those related to information security) and no additional revenue (it is not efficient to strictly track the revenue obtained from the use of virtual space only) but, at least indicatively, this way of thinking can provide management with a useful tool in better management of material, human and informational resources, and increasing the performance of the whole activity at microeconomic level.

Bibliography

Barrdear, J. and M. Kumhof. 2016. “The Macroeconomics of Central Bank Issued Digital Currencies.” Bank of England Staff Working Paper No. 605

Chen, H., M.-H. Felt and K. P. Huynh. 2017. “Retail Payment Innovations and Cash Usage: Accounting for Attrition by Using Refreshment Samples.” Journal of the Royal Statistical Society: Series A (Statistics in Society) 180 (2): 503–530.

Dyson, B. and G. Hodgson. 2016. “Why Central Banks Should Start Issuing Electronic Money.” Available at http://www.positivemoney.org.

Engert, W., T. Gravelle and D. Howard. 2008. “The Implementation of Monetary Policy in Canada.” Bank of Canada Staff Discussion Paper No. 2008-9.

Engert, W. and Ben S. C. Fung, 2017, Central Bank Digital Currency: Motivations and Implications, Central Bank of Canada, Ottawa, Ontario

Freedman, C., 2000, “Monetary Policy Implementation: Past, Present and Future – Will Electronic Money Lead to the Eventual Demise of Central Banking?” International Finance 3 (2): 221–27.

Fung, B. and H. Halaburda. 2016. “Central Bank Digital Currencies: A Framework for Assessing Why and How.” Bank of Canada Staff Discussion Paper No. 2016-22.

Fung, B., K. P. Huynh and L. Sabetti. 2014. “The Impact of Retail Payment Innovations on Cash Usage.” Journal of Financial Market Infrastructures 3 (1).

Lagos, R. 2006. “Inside and Outside Money.” Federal Reserve Bank of Minneapolis Research Department Staff Report 374.

Martin, A. and J. McAndrews. 2008. “An Economic Analysis of Liquidity-Saving Mechanisms.” Federal Reserve Bank of New York Economic Policy Review 14 (2): 25–39.

Raskin, M. and D. Yermack. 2016. “Digital Currencies, Decentralized Ledgers, and the Future of Central Banking.” NBER Working Paper 22238.

Rogoff, K. 2016. The Curse of Cash. Princeton University Press.

Sams, R. 2015. “Which Fedcoin?” https://cryptonomics.org/2015/02/05/which-fedcoin/.

Segendorf, B. and A. Wilbe. 2014. “Economic Commentaries: Does Cash Have Any Future as Legal Tender?” Sveriges Riksbank Economic Commentary, no. 9.

Seth Godin, Presenting Digital Cash, Sams Net Pub., Indiana University, 1995, 256p

Skingsley, C. 2016. “Should the Riksbank Issue E-Krona?” Remarks to FinTech Stockholm 2016, 16 November.

Stevens, A. 2017. “Digital Currencies: Threats and Opportunities for Monetary Policy.” National Bank of Belgium Economic Review (June): 79–92.

FRAMEWORK FOR COMPETITION EVALUATION AT THE MICROECONOMIC LEVEL

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Abstract

Fair competition on the market is essential for the economic and social development and to alleviate poverty. However, the anticompetitive practices and the policies are common and they decrease the possibilities of innovation and economic growth. The governments of the developing countries must identify and locate the anticompetitive arrangements and practices, both in the public and in the private spheres. The framework is intended as a flexible instrument of diagnosis, with sets of questions grouped by themes, being perceived as a convenient and easily used introduction to the manner in which this task can be approached. These measures must analyse the state of competition in each selected sector: identification of markets and competitors, examination of market structure, aspects related to the barriers to the entry on the market, aspects regarding the anticompetitive factors considering the legitimate interests and the main beneficiaries, as well as the governmental policies of identification or the institutions which limit competition.

Keywords: microeconomics, competition, evaluation framework

JEL classification: D20, D25

Introduction

The evaluation of competition should analyse the power of competition on the relevant market and to identify any factors that hinder the efficiency of competition. The key-aspects are: market structure, entry barriers and anticompetitive behaviour. In the case when competition is considered to be limited, the probable resulting damage should be estimated.

What should be done when a decision has been made to make a competitional evaluation of a sector? This depends on the nature of the existing law and on the capacity of the existing institutions. Some aspects raise by this study might be sensitive to particular situations and those who make such evaluations will have to approach in a constructive manner the different levels of technical sophistication. This framework presumes a basic introduction of the topic, particularly in order to develop the decision-making factors.

How to select the sectors and markets to be evaluated? The sectors selected for the evaluation of competition should be both important for the economy and for the consumers, and should have the characteristics which suggest a limited competition. When a selection is made, two questions appear:

1. The sector is important to the economy, because:

- has it a significant contribution to the national product;

- is it connected to other sectors/industries as supplier of inputs and services;

- does it make possible higher profits through innovation, improving the distribution and business processes;

- do the nature and type bestow importance, such as a public enterprise or a mixt public-private enterprise;

- is it significant for investments and for the levels of productivity?

2. The sector is important to the consumers, because:

- does it supply goods or services that are essential, or which matter significantly for part of the consumption expenditure;

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- does it affect, directly or indirectly, the quality of people's life;

- does it contribute to poverty alleviation?

If the answer to both questions is "no", the sector should not be further investigated. If the answer to one or to both questions is "yes", the possibility of limited competition within the sector might be evaluated using the following questions: - are there indicators of consumer or company concern regarding the price or availability of the products of a particular sector, or regarding the access to sources of supply? Mass-media reports can be a good source of information regarding such concerns, such as those of the consumer organisations and professional associations.

- is there a history of the anticompetitive behaviour in the sector? The type of anticompetitive commercial exchanges often goes on for long periods and the past behavioural patterns might indicate possible current problems;

- are there barriers to the entry or expansion of new potential, large suppliers? There is the possibility that the new suppliers coming on the market reduce the price demanded by the existing suppliers. When the new entry is difficult, competition will be weakened, sometimes it is easy fir enterprises to enter a market, but it is difficult for them to expand enough as to act as constraint on the behaviour of other companies from the market. Besides the natural obstacles, the practices of the dominating companies and/or the inadequate governmental policies and statutes, rules and regulations, may delay the entry on the market.

- are there barriers to the ways of maximal support of the businesses? Some factors can limit the capacity of the companies to compete actively. These barriers might include the policies of the professional associations or of the government, regulations which limit advertising, which impose control over the prices, which give preferential treatment for the traditional operators, or which impose quality standards which are higher than the references developed by independent evaluations. Some companies might be responsible for the behaviour which limits the capacity of other companies to run;

- can the real or potential mergers within a sector lead, lead to a significant reduction of the number of suppliers? Most mergers don't affect competition, but there are some advantages for the consumers, by a more efficient production followed by lower prices. However, the decision of a company to overtake a competitor might be due to the desire to reduce competition. If the new entry in this sector is little probable, the increase of the concentration of owners might increase the concerns about competition.

- are the strong legitimate interests susceptible of opposing strongly the competition within a sector? This might mainly for those having strong financial interests to go on with the current pattern of production and distribution.

- has there been within a sector, a long-term pattern of high market concentration? If yes, it is necessary to identify the reasons for this.

The number of sectors which can be evaluated depends on the available funds. It is better to make a lower number of proper evaluations, than a larger number. The evaluations should attempt to get relevant results, through questionnaires, by interaction with market actors, as well as from secondary sources such as mass-media reports. There might be advantages gained by grouping studies of similar sectors, such as the industry network, where the understanding of the network of externalities produced by a study might also be useful for another study.

1. Methods of Evaluating the Competition

The characteristics of the competitive industries include a wider range of selecting products, the entry and exit of companies, changes in company ranking and in their market share, development of products and active innovation. The competitive industries also are susceptible of showing prices which respond to the changes in market conditions, such as changes of the production costs. An industry must not display all these characteristics in order to be branded as competitive, but the lack of many of these characteristics might suggest a lack of com petition.

A way to evaluate the intensity of competition is to acknowledge that it only reflects the competition between the current competitors, as well as the threat from the new entries, the threat of

competition, of replaceable products, of products under development, the purchasing power as well as the negotiation power of the companies supplying inputs on the market (Porter, 1980). Most of these factors are directly or indirectly reflected within this framework.

1.1. Identification of the Relevant Markets and of the Competitors

After a sector has been selected for evaluation, the first step is to identify the relevant "market" within that sector, since there might be several distinct markets. These markets should be examined separately because the level of competitions might vary significantly from one market to the other. The relevant market is a group of products (goods or services) which most of the buyers consider that re reasonably and mutually replaceable, given the prices and conditions of sales. The markets have geographical limits which depend on the value of the product, cost and availability of transportation, etc. the markets include wholesales and retail sales. The next step is to identify the existing competitors.

The main suppliers must be identified by their name. If there are many small suppliers, they should be grouped accordingly. If a possible problem of competition refers to buyers' behaviour, they should be identified similarly. If particular buyers always buy from particular suppliers (they buy particular products from articular suppliers), the market might be less competitive than it seems because, for in stance, the products from different suppliers are not replaceable for other, or because market sharing takes their place. If the buyers procure things from more than one supplier, or change suppliers, the market is more likely to be competitive.

There also are companies that might easily enter the market by adjusting the range of products or b expanding the geographical area they cover, with no important new investments, which might put constraints on the behaviour of the traditional operators. Last but not least, the imports are a realistic alternative for the buyers, taking into account the single characteristics of the products, the time of delivery, the customs taxes and the transportation taxes.

1.2. Examination of Market Structure

The next step is to examine the structure of the markets from that particular sector. This presumes the identification of the relative importance among the main suppliers on the market. If a small number of suppliers account for a large proportion of the offer, the market might be very concentrated.

The market share is usually measured by the value of sales, but the amount of sold goods or the capacity of the suppliers can also be relevant. The available information on the market share can be problematic when they don't refer to relevant markets. When the size of a market is evaluated, the information should be sought by most of the participants (both sellers and buyers), by the relevant professional associations, by the consumer organisations and by any relevant governmental agencies. The high concentration doesn't necessarily show a high market power and a competitive problem; other aspects should be taken into consideration.

The level of market concentration and of change in time is also of interest. If there is a single important supplier, this might suggest the existence of significant entry barriers or an aggressive behaviour on behalf of that supplier. Other explanations are possible too.

If there were few entries, or even no entry, for a long period, this might suggest the existence of high entry barriers, or that the potential new entries fear an adverse response from the traditional suppliers. The results of the past entries can be significant. The problems of interest refer both to the new companies that remained on the market; to how successful were they in gaining a market share and to how much they needed to get to a significant size. Nevertheless, other possibilities of entry on a limited market must also be taken into consideration. For instance, there might be a natural monopoly, or there might be n significant increase of the market size, or the government might have not given the licence to enter the market.

The buyers might have a power of negotiation which to reduce the capacity of the sellers to abuse of their market power. This constraint is probably higher when a single buyer matters for a substantial part of the sales of an individual company. The buyers, in order to have the possibility to constraint the suppliers, must have a credible alternative source of supply (including the possibility of self-supply). Under certain circumstances, the state enterprises dominate a sector,

and there can not be a single buyer or a single seller, which is the government itself. The situations of dominating power of the state often exist in sectors such as electric power and water supply.

If the concern relays to the market behaviour of the buyers, rather than of the sellers, a single seller or a small number of sellers matter for much of the trade, the market power of the sellers might limit the capacity of the buyers to abuse of their market power. Last but not least, if the suppliers of significant inputs necessary to any seller have high negotiation power, this might limit the market power of the seller.

2. Aspects Regarding the Barriers to Market Entry

In order for a market to remain competitive, there must be a possibility that new companies enter the market and for the existing companies to develop or leave the market. If there are barriers which prevent the entry or delay it considerably, or if the entry would be costly, the existing suppliers might increase the prices above the competitive level. The actual entry or the probability of entry may restrain the market power of the companies. Even if the market share is high, this could not take the prices above the competitive levels if the new suppliers want to entry the market. However, if the threat of a new entry is to pose significant restraint, it has to be possible, in good time and sufficient. If the entry is to be “probable”, it has to be commercially feasible. If the entry is to be “sufficient”, it should have an enough large scale so as to challenge the traditional companies to change their market behaviour. Except for the case in which the possible entry would be “in good time” (achievable within a reasonable time interval), it would not be possible to influence the behaviour of the traditional companies. The new potential entries might include foreign companies and this would raise the problem of the manner in which the policies regarding the foreign direct investments affect the possibility of competition. If there are gender-based barriers, these make even more difficult (if not impossible) the entry of women on particular markets, which could significantly reduce the level of competition on those particular markets.

The entry barriers can be defined in several ways. One classification includes three categories: natural, strategic and regulatory. The type of barriers might also be a problem in specific situations, such as the cultural practices or religious affiliation.

The *natural barriers* result from the resources or technology required to become supplier for the market. They might include the existence of large scale economies such as the industrial networks (telecommunications, natural gases, oil, broadcasting, and electric power distribution). Other natural barriers include the problems which the newcomers might have in obtaining access to technology, raw materials or distribution channels. Another example is the case in which the market entry would presume large “irrecoverable costs” (the costs that cannot be recovered if the company decides to leave the market).

The *strategic barriers* result from the actions of the existing suppliers, intended to deter the new entries. They might include:

a) Establishment of additional capacities;

b) „Linked grouping and sales” for the newcomers, either to compete for grouped products, or to compete for a single product. However, there are good arguments for this pattern whether it is cheaper to manufacture products grouped or separately.

c) Exclusive long-term contracts, exclusive suppliers and distribution agreements. They might be sometimes justified, but exclusivity makes the market more competitive than otherwise;

d) Individual or collective, acting in a manner that shows the company or companies that they might act in an aggressive or greedy manner if the new entry took place, such as through reactions to the price.

The *barriers and regulatory policy* of entry on particular markets might exist at any governmental, national, state or local level. There are solid grounds of the public policies for restrictions, such as: health and safety problems, national security, or even short-term “industrial policy” to develop the incipient industries or specific geographical areas. However, the reasons for the restrictions that limit competition need objective justification. There are regulatory barriers that restrict competition; the prejudice obtained by the loss of competition should be compared with the benefits required by

the existence of the barriers. There should not be feasible alternative ways to accomplish the policy objectives that would cause smaller damages from the loss of competition.

The *type-based (gender) barriers*. Lawful competition presumes equal opportunity for everybody but, particularly in the developing countries, women are often disadvantaged in business.

3. Ways by which the Governmental Policies or the Institutions Limit Competition

Despite the extended privatization of the past two decades, the *state enterprises* are yet significant in the economies of many countries. If these enterprises engage themselves in commercial economic activities, they should do this, as much as possible, under the same conditions with other companies. This matter requires examination if the market competition is altered by the existence of a state enterprise. Another problem is whether the privatized state enterprises benefit of subsidies, explicit or implicit, that could make competition difficult for the existing private companies, and which might deter the entry of new suppliers on the market. If the state enterprise benefits of advantages, and these might seem to limit competition, it is important to have a perceptible effect on the level of competition so that the worry is justified.

The *public acquisitions* might account for a significant part of the trade within a particular economy, and the manner in which these acquisitions are done may rise substantial problems of competition. If a government is a major buyer of products, the manner in which it organises it acquisitions might limit the possibilities of the new competitors to enter the market. If the government is a major buyer of products, it might have a negative impact on the competition if there is no requirement for a minimal number of offers, or if there is a short period in which to answer the call for bids, or if the criteria for bidders favour the existing or large suppliers.

The *regulated sectors*. Regulation might be necessary from economic reasons when market structure makes it difficult or even impossible the development of the competitive markets, such as natural monopolies, or the situation in which the sectoral operations raise significant problems to the public policies. Generally, regulation can be justified if the competition cannot be accomplished through market forces (like in the case of natural monopolies, if a company can produce more efficiently than several others), if the competitive markets would not yield a socially-desirable outcome, or if the social and private services differ significantly (for instance, when there are externalities). Other reasons for sectoral regulation include the supply of a mechanism which to support the technical standards to guarantee the quality and safety, the access to essential facilities, as well as the provision of methods to encourage efficiency and the cost price. The regulatory authorities should try to promote competition, as much as the policy of the objectives and the nature of the sector make this possible. The technical progress might increase the possibilities for competition, making it possible the separation of the competitive markets from the non-competitive ones within a sector.

3.1. Considerations on the Legitimate Interests

In many situations there will be stakeholders that oppose the increase of competition on a particular market. Even if the identity and objectives are known, their power and influence should be reflected in the evaluation of the competition. The policy, including the financing of the political parties from sectoral benefits, might be involved. The stakeholders “can be of several types, including political decision-making factors (at all governmental levels), regulatory authorities, influential natural persons, traditional companies (state enterprises included), the newcomers, foreign companies, organisations of the civil society, groups of interest, consumers, external stakeholders, the academia and the mass-media. There might also be coalitions of interests. The range of interests of the stakeholders will be seldom stated in the documents circulating on the market, and it might be necessary to check and analyse the press articles and the information from other publications. The legitimate groups of interest might have enough influence on the formation of the governmental policies so as to determine them to act in favour of one group or another.

In the matrix below, “influence” refers to the power of the stakeholder that will affect the level of competition on the market, while “importance” refers to the level of priority which the researcher feels he/she has to give in order to meet the needs and interests of the stakeholders.

A- high importance, low influence	B- high importance, high influence
C- high importance, low influence	D- low importance, high influence

3.2. Aspects Regarding the Anticompetitive Behaviour of the Companies

Some factors aid making an image of the risk of anticompetitive practices. Any of these factors taken separately, doesn’t necessarily determine significant problems of competition, but taken together they might indicate situations in which problems are likely to appear. The factors that might limit the level of competition can be as follows:

a. horizontal – with effects between companies at the same point of a supply chain in one or several markets (between competitors);

b. vertical - with effects between companies at different points of the same supply chain (for instance, between producers and the retail sellers);

c. other factors - include factors beyond market structure and company behaviour, such as consumer behaviour and information.

The three main types of anticompetitive behaviour are those arising from secret agreements between competitors, abuse of dominant position of the enterprises with market power and some mergers and acquisitions. All three can raise both horizontal and vertical problems, and can also be affected by the horizontal and vertical structure of the markets or by information problems.

Company behaviour: horizontal aspects

a) Abuse of dominant position. A dominant company is that company which has enough market power to influence market price and decisions, without having to consider the probable reaction of the competitors. The existence of a dominant position is not necessarily harmful, but this high market power might be used in an abusive manner. The “abuse of dominant position” describes the situations in which a dominant company uses its market power to increase prices above the competitive level, or to prevent the small competitors to increase their market share, or to deter newcomers from entering the market. A company must have a high market share in order to be dominant on a market.

The abuse of dominant position might involve a behaviour that excludes competitors and a behaviour that exploits consumers. The consumers can be exploited when the prices are too high, while the competitors may suffer when the prices are too low because of the predatory pricing. To determine whether the prices are too high or too low, always requires a careful study.

The predatory pricing appears when a company with a dominant position, well-funded, sells its products below the cost price for a period of time, with the intention of compelling the smaller competitors from the market to exit the market, and when this happens, is raises the prices again. This tactics may also be used to deter a company from entering the market.

The types of behaviour of the dominant companies that can be used to exclude the competitors or to exploit consumers include: discriminatory prices (justified sometimes when the procurement costs are different), reductions when the procurement costs are the same, linking and grouping.

Other types of strategic behaviour include the establishment of large reserve stocks, which to flood the markets in response to entries. The traditional companies do this to increase their credibility, to block the entry or they may behave unpredictably or aggressively in order to make a strong reputation.

b) Complicity and cartels. Competitors reach, sometimes, agreements to limit the intensity of competition by setting the prices, by sharing the market, by boycotting the companies that would not cooperate with them, or by reducing the bids. Tacit agreements such as these are called cartels. The cartels might involve only internal companies, or a combination of internal and

international companies, or just international companies („Global Economic Perspectives 2003", World Bank).

The cartels usually operate secretly, and their existence might be hard to prove. Many have never been detected. The "tacit understanding" is also possible. The tacit understanding occurs when the companies reach an understanding with no direct contact, simply on the basis of their expectations to the response of others regarding the changes of behaviour. This can lead to "parallel prices". However, in order to justify an understanding, the companies act in a collective manner and usually have to identify other factors that consolidate the conclusion based on parallel prices of the competitors.

One of the weaknesses of the cartel is the fact that it can be more profitable for a member when it cheats the agreement in order to make higher sales. For a cartel to survive, it must be possible that such actions are both detectable and punishable by the other parts in the agreement. Despite their vulnerability to "cheating" some understandings have been working for many years.

The factors that make more profitable the secret agreements are: market structure (several concentrated markets, less entries, similar costs and trans-property links between the competitors) and structure of the demand (lower purchasing power, stable demand, regular orders or biddings).

When the changes of price of the suppliers tend to follow similar patterns, practices appear which allow the suppliers to coordinate the changes of price (for instance, price announcements long before the actual date of change and/or exchange of information between the suppliers on subjects such as costs). The existence of "practices that facilitate" can provide a channel for the competitors to signal their price intentions, with no direct communication between them. These practices might weaken competition.

- Product nature: when there are very small differences between the products of the competitors, such as in the case of merchandises.

The factors that can help the cartels to keep working include situations that allow the cartel members to know the price changes of the competitors or the sold amounts, as well as to distinguish those coming from "cheating" because of the understanding, such as changes in consumer demand.

Other influences are:

- When there are exclusive territories (which reduce the competition between retailers for a particular brand), the producers of other brands might take advantage of the stability of the resulting price and share the market for own products.

- When several manufacturers sell through a single retailer, the retailer might facilitate the agreement.

- The professional associations sometimes play a role of facilitating the agreements. Any commercial or professional association seem to have a role in setting the prices. They can benefit of a wider community, as well as of their members. However, the trade associations try to prevent competitive prices in their industry. When an industry is submitted to price inspections, the governments often rely on the relevant professional and trade associations to apply and coordinate the inspections. After the checks are eliminated, the practice of competitors' consultancy over the prices might go on, even if it was thereafter branded as illegal. If the proposed price increases are announced by a trade association, this might show that the association plays a role in price-setting decisions. Sometimes, the professional associations will exclude from affiliation the eligible companies that lower their price.

c) Mergers. When there is a substantial increase of concentration by mergers of acquisitions, the dominance or agreement might be much more profitable. However, when there are few barriers to the entry on a market, or compensatory purchasing power, the anticompetitive influence resulting from the high concentration might be offset.

Company behaviour: vertical aspects

The domination, agreements and mergers can generate additional problems when there are vertical restrictions within the supply chains between the producers, wholesalers and retailers. Any supplier requires the retailers to sell below the minimal recommend price, or the discount levels are observed, so that the buyers are prevented from seeking sources of supply with lower prices.

Conclusions

Sometimes, the dominant position is desired or unavoidable, such as the instance when there are large scale economies, or the markets with strong network effects. Sometimes these markets are regulated by the governmental agencies and this leads to the possibility of regulation. The dominant position on the market may also result from the former state control or from favours.

The number of state owners and of those sanctioned by the marketing authorities was much reduced by the domestic economic liberalization and by the international trade negotiations. However, sometimes, the reforms have been incomplete and the removal of the legal monopolies of the marketing councils was followed by the private monopolies, many times being the object of governmental interventions.

The biddings with fake offers, both for the routine supplies and for the infrastructure projects are common in many countries. The governmental acquisitions are often big and bidding arrangements can have a strong impact on the efficiency of the governmental operations and on the capacity of supplying services to its people. When bidding arrangements occur, it means that the governmental agencies are not able to supply a lower amount of services or of infrastructure for any given budget.

The behaviour of the market enterprises suggests either that the suppliers coordinate their behaviour by agreements of tacitly, or that the large suppliers with market power use their anticompetitive domination in various ways.

If the products are complex or purchased rarely, the buyers don't have enough information to make informed decisions about the purchases, including about the probable cost, which makes competition less efficient.

Bibliography

Ambastha A., Momaya K (2004), Competitiveness of firms: Review of theory, frameworks, and models. Singapore Manag, Rev. 26(1):45-61;

Barney, J.B., (1991), Firm resources and sustained competitive advantage, Journal of Management, 17, 99-120;

Chaston, I., (1997), Small firm performance: assessing the interaction between entrepreneurial style and organizational structure. Eur. J. Marketing, 31(11/12):814-831;

Chung, W. and Alcacer, J., (2002), Knowledge seeking and location choice of foreign direct investment in the United States, Management Science, 48(12), 1534-1555;

Coviello, N.E. and McAuley, A., (1999), Internationalisation and the Smaller Firm: A Review of Contemporary Empirical Research, Management International Review, 39(3), 223–256;

Dobrotă, N., (1997), Economie politică Bucureşti, Ed. Economică;

Dunning, J.H., (1981), International Production and the Multinational Enterprise, London: Allen & Unwin;

Hassel, A., Höpner, M., Kurdelbusch, A., Rehder, B., and Zugehöret R. (2003). Two Dimensions of the Internationalization of Firms, Journal of Management Studies, 40(3), 705-723;

Lu, J.W. and Beamish P.W., (2001), The Internationalisation and Performance of SMEs, Strategic Management Journal, 22 (Special Issue Strategic Entrepreneurship: Entrepreneurial Strategies for Wealth Creation), 565-586;

Man W.Y., Lau T., Chan K.F., (2002), The competitiveness of small and medium enterprises. A conceptualization with focus on entrepreneurial competencies. J. Bus. Venturing. 17:123-142;

Porter, M.E., (1980), Competitive Strategy, New York: Free Press;

Porter, M. E., (2001), Avantajul concurenţial, Bucureşti, Editura Teora;

Rugman, A.M., (1981), Inside the Multinationals: The Economics of Internal Markets, New York: Columbia University Press;

Siggel E., (2006), International competitiveness and comparative advantage: A survey and a proposal for measurement. J. Ind. Compet. Trade 6:137-159;

Smith, S., (1995), World class competitiveness. Manag. Serv. Qual. 5(5):36–42;

Sullivan, D., (1994), Measuring the degree of internationalization of a firm, Journal of International Business Studies, 25(2), 325-342.

Zahra, S.A., Ireland, R.D. and Hitt, M.A., (2000), International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance, Academy of Management Journal, 43(5), 925-950.

INNOVATIONS IN DIGITAL FINANCE

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Abstract

It is a fact that today we are confronted with the extraordinary impact that digitization plays in developing financial innovations, more precisely, we can say digital finance innovations. We must emphasize that social inclusion and financial progress are the results of the digital sector's digitization trend with a major impact on the work of financial and non-banking institutions. The creation of new distribution models (external agent networks, banks without the branch network), the emergence of new customer access opportunities and back office management are just a few of the financial sector challenges that are in the process continuous innovation and adaptation. The Fintech phenomenon has created new opportunities for customers, namely the rapid identification of financing for the development of their own businesses and the high flexibility of the award conditions. The use of this tool should become more concrete and consistent in Romania, and customers should be educated to master new digital tools. There is no doubt that there is a revolution! In the context of the financial crisis, microfinance continues to grow, providing new digital opportunities for new generation.

Key words: digital finance, fintech, sustainable development, innovation

JEL classification: O16, O31, O42

Introduction

In the past, we witness a wave of industrial technologies, a wave of innovations, which we find more and more in the last year in the financial technology sector. Moreover, financial innovation is directly linked to the phenomenon of social and financial inclusion, as well as to financial innovation in the digital space.

The establishment of new microfinance institutions using blockchain technology, the development of automated savings programs, social money sharing and digital-based investment, while traditional financial institutions conduct a policy of testing new strategies tailored to current, innovative currents.

Starting from these considerations and corroborating with the top 2017 most innovative finance companies (published by the World Economic Forum), we can assert that this paper can also be considered a synthesis of good financial innovation practices.

Materials and Methods

Regarding the methodology of research on financial environment, complexity and diversity of the issues addressed have required the use of methods, techniques, tools, and procedures of scientific investigation and interpretation to which it's attached particular importance:

- Documentation, namly, accessing and studying general and specialized bibliography, domestic and foreign, state approach to knowledge issues investigated financial environment and scientific substantiation of the research;
- Rational method, used as an instrument of knowledge, reflection, analysis, organization, and ongoing scientific research approach;
- Integration of forms, methods, and logic operations research carried out through the use of analysis and synthesis, abstraction and concretization, comparison, generalization, and systematization;
- Statistical methods, through the use of descriptive statistics and statistical analysis;
- Observation method, carried out systematically and analytically;

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- Discussions with experts from institutions and national and international institutions, but also the beneficiaries of financial products and services;
- Data analysis and interpretation, using graphs, tables, and figures to highlight various developments in financial environment.

Using the classic instruments of scientific research, based on analysis and synthesis, induction and deduction, general and particular, and adding modern methods, authors achieved substantial and pertinent analyses and studies on financial environment main ways, both internationally and especially national. Contributions of authors on investigated issue are highlighted during the research work and theoretical and applicative significance value resulting from the conclusions and proposals that they have formulated and promoted.

The research results are presented using formulas, tables, figures, and graphs. The theoretical information needed for the research was taken from literature and specialized works in the field of financial environment investigated, from home and abroad. Statistical information and concrete data on how financial environment works were taken from reports and statistics of institutes involved in financial environment in the country and abroad as well as to public bodies and private specialist.

This method of analysis provides a more rigorous substantiation of the decision-making process and also maximum reduction in uncertainty.

The primary data and information sources have been correlated with the secondary information resources, regards: economic analysis, reports of the local, regional, national and international level, institutions websites, and report analysis (Manta O., 2017).

The research strategy of the researcher based on the use of a mix of information resources in accprding with the reports and analysis: “the action researcher does not become an independent observer, but becomes a participant, and the process of change becomes the subject of research”.

Results and Discussions

Financial innovations must result in a direct connection with society, with the economic environment, and be adapted to our realities and not just to the financial target, which is only the final result.

A first financial innovation in this ranking is Goldman Sachs, the financial innovation in consumer credit. Year 2016, is the year when Goldman Sachs launched its first consumer credit product, namely the digital credit platform called Marcus, having as its primary objective helping people get out of debt. Although at the level of fintech companies, the lending policy for the most in need is the main objective, however, more affordable loans, but they have failed to promote, but Goldman has been able to give very large amounts to those in debt using this Marcus digital platform. The financial company became public in 1999 and underwent several changes, passing through several events, namely insider trading, investor fraud and the contribution to a massive financial crisis. And yet, as a result of this new innovation, it has succeeded since 2017 that stock prices have come close to the pre-crisis level following Marcus's launch and a minimal savings account, making Goldman a remarkable new player in the banking market consumers in debt.

A second financial innovation is given by Digit, specifically financial digitization. Digit was launched in 2015 as a chatbot SMS and helps the young generation to access the money-saving service by automating the process. The process consists in linking to a verification account, analyzing spending habits, and then saving small amounts of cash every few days, storing them in a zero interest savings account (the Digit founder hopes to ultimately provide consumer interest in their accounts). This chatbot sends text back to the account holder with updated savings information. Users can write Digit text to transfer money from the Digit Savings account to their regular checking account. Starting in 2017, Digit helped its users save more than $ 350 million as of February 2015. Digit competes with a number of other companies that are trying to automate money management, including Acorns, which exchanges and places it in an investment account; and Qapital, an automated saving tool similar to the one that then-then-that.

This year, Digit has evolved from just a chatbot SMS to an iOS and watch OS app, where users can view their transaction and savings histories as well as change their settings. At present, we are

increasingly witnessing such applications in the financial field that are in the interest of the millennium. Among the many applications that occupy this space, Digit seems to be the most popular. The investment in the development of this application has been raised to $ 36.3 million in capital and processes an average of $ 20 million per month for its users.

The third financial innovation in 2017 was ranked as IEX. IEX, which aims to combat high-frequency trade, traded on a computer. The new exchange, co-founded by Brad Katsuyama, aims to compete with the Nasdaq and NYSE and should provide a fairer balance for all who are traded on the market by using a "speed hit" that essentially forces high-frequency trading machines the same rate as the other players. The existence of this new type of trading / exchange and its approval by the Securities and Stock Exchange Commission has had a major impact on the scholarships and shook the industry. Nasdaq threatened to sue the SEC prior to its decision, and several representatives of high-frequency trading firms tried to discourage the SEC from assigning the IEX exchange status. But IEX prevailed. So far, it has an average market share of 1.95%.

IEX rose slowly. It started in 2016 by slowly adding stocks to its market, especially by adding the least likely to be traded, to ensure that the exchange has no problems. In November 2016, the company hired Sara Furber, who previously served as General Manager at Morgan Stanley, to be the head of the exchange. A number of companies have expressed an interest in being listed because of frustrations over competition with high-frequency traders. IEX intends to allow companies to include the list starting with 2017.

The fourth financial innovation in 2017 is Ethereum. To create a more favorable blockchain for Ethereum developers. Ethereum is a block-based decentralized platform that allows smart contracts using an element called ether. Anyone can create programs on the network and for this reason the ecosystem has attracted the attention of Microsoft, Imogen Heap and Deloitte. In 2016, Microsoft launched the Ethereum Consortium Blockchain Network on the Azure platform to allow platform companies to set up their own private blockchain. But this was not the only activity on Ethereum in 2016. One of the most prominent applications in the network was DAO, which earlier this year raised a $ 150 million investment fund. This investment was forced by a hacker, causing the platform to divide several times in an effort to limit the evil actor's ability to steal funds (Manta O, 2017).

While DAO's failure has caused concern among users, Ethereum is still ready for an interesting growth in 2017. In December 2016, Ethereum, Consensys, was selected by the United Arab Emirates Accelerator Fund to participate in a program 12 weeks and eventually a pilot project for Dubai. It's still early days for the Ethereum block, but there seems to be a great potential for corporate adoption.

The fifth financial innovation was given by Ant Financial. For the banking sector on economic growth in rural China. Former AliPay, Ant Financial Services is a spin-off of Alibaba in China and similar to PayPal in the U.S. The organization has expanded beyond mobile wallet Alipay to include an online lending platform, MYbank, and an investment fund, Yu'e Bao. In 2016, Ant Financial won a round of financing of $ 4.5 billion and purchased software verification Eyeverify. The company has 450 million users and processes 58% of all online payments in China. While competitor Tencent has managed to separate the market by developing the WeChat Pay platform, Ant Financial remains ahead, partly due to its expansion into new products and financial regions, as well as partnerships with the Didi Chuxing platform and food delivery service.

In 2016, Ant Financial invested in a used car dealer, Alibaba's online ticketing platform, a wealth management company, a food delivery service, and a large Yum fast food conglomerate! China. The company made foray into India by using an existing partnership with Uber, so customers can use both Alipay and Paytm, a company that has invested in two years ago, instead of a credit card to pay for walks. In Europe Agreement with terminal Ant Financial German Wirecard payment processing allowed its acceptance in some retail stores. Also made widely informed traders, giving them customer data in exchange for acceptance of Alipay. While continuing to expand beyond China, the company is preparing to become public in 2017.

The sixth financial innovation in 2017 is Quantopian. For agglomerated investment algorithms. Quantopian is an investment management firm that allows 100,000 users (or "quants") to write their own investment algorithms and offer licensing agreements to those who fit into its investment strategy. (In 2016, he offered 20 such transactions.) In 2017, Quantopian plans to launch its own investment fund.

The seventh financial innovation in the ranking is Robinhood. To add premium benefits to trading, Robinhood is a US stock brokerage that offers free deals. It was founded in Palo Alto, California in 2014 by two former roommates in Stanford, Baiju Bhatt and Vlad Tenev. The various trading commissions often hamper the entry of young people to the market, but by eliminating taxes and streamlining the process, Robinhood hopes to open a new demographics trading. The tool is the fastest growing brokerage in history and was the first app to win an Apple Design Award.

In 2016, Robinhood launched a subscription model, Robinhood Gold. For US $ 10 per month, users receive instant deposits (without a waiting period of three days) and can trade just prior to opening the market and immediately after it closes. This privilege is designed to attract more experienced merchants from other brokers. The company has expanded into China through a partnership with Baidu, allowing Chinese citizens to buy and sell stocks.

Eighth financial innovation is Venmo. For expanding peer-to-peer transactions. In 2016, PayPal decided to eventually expand Venmo beyond peer-to-peer. Users can now use Venmo to make purchases in other mobile applications. The feature was launched to select applications including Munchery, Gametime, Panda Parking, Priv and Poshmark, and Venmo is planning a broader expansion soon. This is the first attempt to make Venmo a PayPal money generator. In 2016, Venmo launched a national ad campaign and had a total volume of $ 17.6 billion.

When Venmo debuted in 2009, it was not the first mobile P2P payment option available, but has since become one of the most popular. Venmo was acquired through the Braintree digital payment process in 2012, which PayPal bought it the following year. Venmo is for users because it offers a quick and fun way to send money regardless of your bank account. Exchanges can be private or public; users are asked to include emoji transaction descriptions, which then friends can "like" or comment on the social feed of the app.

The ninth financial innovation is Visa. To empower payment by wearing. In 2016, Visa launched a variety of experimental initiatives, including a mobile white app for banks (with a pay-to-pay similar Apple Pay) and real-time payments through Visa Direct. Stripe, PayPal and ClearXchange integrated with the Visa platform to send and pay real time payments - Visa response to the Venmo experience. Perhaps Visa's most interesting experiment was in baking technology. During the Olympic Games in 2016, Visa handed out sporting spins to sponsored athletes. He also sold a watch and a Swatch watch with the same scanning-like capability as the ring. In August 2016, the credit card company revealed to the NFC Ring audience. Similar to the Olympics concept that can be worn, the NFC ring allows consumers to shop at field terminals close to the field, simply by lifting a joint.

Visa has also begun to experiment with the block of flats in Europe. In collaboration with the BTL group, Visa will explore how to use this technology to make interbank transfers more efficient both internally and internationally.

Forerunner Ventures is the tenth financial innovation in 2017. Forerunner Ventures is a women-led company that has made great bets for e-commerce and consumer brands. She was the only company to invest in both the Dollar Shave Club and Jet.com, both offering billions of dollars in 2016. In an interview with Fast Company in 2015, founder Kirsten Green explained that he was choosing companies based on the experience they offer, rather than on the product they produce or on their ability to offer a competitive price. She is looking for companies that have unwavering attention to detail: "how customers feel when landing on the home page, taking into account what the package looks like when it arrives in the mail," she said. Forerunner also made the predictive bet that with the passage of time, big brands and retailers would pay a fat price to companies that have a digital business. This idea is gathering now.

The top 10 financial innovations were presented in The 20 Most Innovative Companies In Finance 2017, World Economic Forum 2017 and The Fast Company, https://www.fastcompany.com/3067885/the-10-most-innovative-companies-in-finance-2017.

Conclusions

An important aspect is to create innovative models of finance area and training of human capital involved in providing financial services and financial education of those who accessed financial innovative aplications. European and global level is currently trying to achieve special finacial

aplications, mainly in credit and finance areas. These concerns and decisions can directly influence the development of activities in these areas through access to application from milieniens.

We are at the stage where we are obliged to approach decisions leading to the reestablishment of new principles of lending institutions to ensure local stakeholders and vital sectors and localities to strengthen economic welfare. It is the establishment of banking institutions to finance economic entities with legal personality: banks, in virtual areas, where crediting legal entities and individuals active: banks to finance exclusively educational or health institutions in areas. Capital required to set up such institutions should be ensured through government financial contributions for which payment to be repaid in time. To achieve this goal of establishing a national system of finance areas should be started from what was good in the credit and financial system areas in the world in the interwar period, especially from existing financial technology models today in European Union, United State of America and China.

Bibliography

Alvarez, Fernando; Francesco Lippi (2009). "Financial Innovation and the Transactions Demand for Cash". Econometrica. 77 (2): 363–402. doi:10.3982/ECTA7451.

Allen, Franklin; Douglas Gale (1988). "Optimal Security Design". The Review of Financial Studies. 1 (3): 229–263. doi:10.1093/rfs/1.3.229.

Friedman, Benjamin M. (2000). "Decoupling at the Margin: The Threat to Monetary Policy from the Electronic Revolution in Banking". International Finance. 3 (2): 261–272. doi:10.1111/1468-2362.00051.

Goodhart, Charles A. E. (2000). "Can Central Banking Survive the IT Revolution?". International Finance. 3 (2): 189–209. doi:10.1111/1468-2362.00048.

Li, David X. “On default correlation: A copula function approach.” Journal of Fixed Income 9, no. 4 (March 2000).

Duffie, Darrell; Rohit Rahi (1995). "Financial Market Innovation and Security Design: An Introduction". Journal of Economic Theory. 65 (1): 1–42. doi:10.1006/jeth.1995.1001.

Melamed, Leo (1996). Leo Melamed: Escape to the Futures (First ed.). Wiley. ISBN 0-471-11215-1.

MacKenzie, Donald (2006). An Engine, Not a Camera: How Financial Models Shape Markets. The MIT Press. ISBN 0-262-13460-8.

Miller, Merton H. (1986). "Financial Innovation: The Last Twenty Years and the Next". The Journal of Financial and Quantitative Analysis. 21 (4): 459–471. doi:10.2307/2330693. JSTOR 2330693.

Myers, Stewart C.; Nicholas S. Majluf (1984). "Corporate financing and investment decisions when firms have information that investors do not have". Journal of Financial Economics. 13 (2): 187–221. doi:10.1016/0304-405X(84)90023-0.

Shiller, Robert J. (2008). "Derivatives Markets for Home Prices" (PDF). Cowles Foundation Discussion Paper no. 1648.

Persons, John C.; Vincent A. Warther (1997). "Boom and Bust Patterns in the Adoption of Financial Innovations". The Review of Financial Studies. 10 (4): 939–967. doi:10.1093/rfs/10.4.939.

Ross, Stephen A. (1989). "Institutional Markets, Financial Marketing, and Financial Innovation". The Journal of Finance. 44 (3): 541–556. doi:10.2307/2328769. JSTOR 2328769.

Tufano, Peter (2003). "Chapter 6 Financial innovation". The Handbook of the Economics of Finance. Volume 1, Part 1. Elsevier. pp. 307–335. ISBN 978-0-0804-9507-1.

Woodford, Michael (2000). "Monetary Policy in a World Without Money". International Finance. 3 (2): 229–260. doi:10.1111/1468-2362.00050.

A THEORETICAL APPROACH ABOUT NEW PERSPECTIVES IN TAXATION AT NATIONAL AND INTERNATIONAL LEVEL – BEPS AND ITS IMPLICATIONS IN ROMANIA

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Abstract

There is a big interest about the implementation of BEPS Plan and the manner it would configurate the international and national tax systems. Mostly, any change in fiscal legislation determines the question: „ does it change the unique rate?", but some other changes may strongly influence the fiscal environment, as the BEPS Plan shows itself. The scope of this article is to present an evolution of the main changes in international legislation, as well as to clarify the BEPS objectives and to present the main changes in taxation to which we will take part in the next period. We used a descriptive methodology, namely scientific articles published in various journals, books that are relevant in the specialized domain, legislation, official documents of different tax organizations, tax documents.

Keywords: tax regulations, BEPS, tax changes, OECD

***Jel Classification**: F 23, K 34*

Introduction

Developing the business environment at international level has led in time to stronger integration of national economies into the global economy. However, when different tax systems interact, the prerequisites of double international taxation are created, which results in slowdowns in the pace of global economic development and declines in prosperity reached by various countries. Therefore, at global level, the need for concerted actions on the elimination of double taxation has been understood on the basis of internationally recognized rules and brought together in bilateral treaties concluded with a view to regulating the elimination of double taxation.

Under these circumstances, the OECD created the Convention Model on the Elimination of Double Taxation and Tax Evasion, a model which had as a basic criterion the taxation of the national enterprises in the jurisdiction in which they registered their headquarters. However, due to the rapid development of the world economy in recent years, the OECD model has begun to show its limits and to create impediments in the development of both the countries that have adopted it and multinational companies.

For these reasons, the G20 Group, which brings together the world's most important economies, has asked OECD to modify this model. Therefore, the OECD has developed a Plan of Measures to Prevent the Erosion of the Tax Base and Profit Transfer, an action plan known as the BEPS Action Plan.

The BEPS Action Plan is a radical change to the principle that has long ruled the OECD's tax philosophy, namely taxes and dues should be paid either where a multinational company has its office registered or where intellectual property rights on licenses and patents are registered.

The main change was imposed by the limitations that this principle showed in terms of the development of the information society and the difficulty of adapting of the developed countries governments to this new evolution of the global economy. In international practice, this principle allowed and even encouraged company registration and the transfer of intellectual property rights to low tax jurisdictions or even to tax havens, thus substantially reducing the level of tax collection in developed economies.

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Evolution of Changes in International Taxation

In time, there have been various structural changes in the world economy, largely driven by global economic and financial crisis. If the crisis of 1930 led to the acceptance of the need for state intervention in the economy in recession periods, by increasing public spending and investment, in order to fill the aggregate demand gap (Keynesian model), the crisis of the 1970s led, on the contrary, to economic liberalization, privatization, and deregulation, that made possible the economy revitalization in the 80s and 90s (the neoliberal model inspired by Milton Friedman).

This wave of economic liberalization, coupled with the technological revolution, especially in the communications and IT sector, has also led to an increase in globalization, an exponential increase in international trade volume, and the accumulation of imbalances, both in terms of income distribution in society and in terms of tax treatment of capital relative to that of labor.

Much more dynamic and easier to move from one jurisdiction to another to seek a more favorable tax regime, capital has become more and more difficult to tax by states all over the world, which started to increasingly base on labor and consumption tax revenues.

In 2010, the United States launched the Foreign Account Tax Compliance Act (FATCA) - a law that allows the US Fiscal government to gather financial information from financial institutions around the world about the income situation of US citizens in foreign accounts. This was the beginning of a real revolution in the international tax system.

The 2013 year was extremely active, especially when OECD launched the report on tax base erosion and profit transfer (BEPS), regarding three areas: adopting new standards to ensure the coherence of direct taxation systems at international level, realignment of tax system that should take into consideration the substance elements and increasing transparency, by new reporting rules and information exchange.

In Romania, in 2014, was introduced the holding regulation, which allows the Romanian firms to establish this type of companies, with no taxes on dividends distributed and capital gains.

Also, Netherlands introduced in the domestic legislation measures through which tax authorities were informed about the economic elements on which the holding company was set up, about the final beneficiary of the dividends and the confirmation that he had paid his taxes in his residence country.

Other European countries have also taken unilateral measures in their own tax legislations to combat double non-taxation. For example, Poland introduced the regulation on foreign controlled companies (in force since January 1, 2016). It involves taxing companies outside Poland that are owned by at least 25% by Polish companies and are taxed in their jurisdiction with a lower tax of 14,25%, if the income is derived from passive activities. Another example is Austria, which introduced provisions on limiting interest deductibility if the related income is not taxed.

In parallel with the exchange of tax information and the introduction of the above measures, mechanisms for the exchange of financial information were also introduced. In July 2014, it was also published by the OECD the Common Reporting Standard (CRS). CRS is the Standard for the Automatic Exchange of Financial Information which establishes a comprehensive methodology for the exchange of information between tax authorities on financial assets.

The transparency created by CRS is desidered to represent another element in preventing taxpayers to use financial accounts from other jurisdictions to avoid paying taxes in their residence country. Tax authorities are informed, through an automatic data exchange mechanism, on the taxpayers that obtain revenues in the foreign accounts or other financial placements.

The most effective measure to implement the exchange of information was the Multilateral Convention on Mutual Administrative Assistance in Tax Matter, signed by more than 80 countries. The next step was to sign the declaration of compliance with the provisions of the Multilateral Agreement on the Exchange of Financial Information, a document signed by Romania and 51 other jurisdictions. Romania began to exchange information in September 2017 for the 2016 financial data.

Also, Switzerland, known for its banking secrecy, has introduced the White Money Strategy - a strategy that is being used by countries that have not passed in the criminal law field tax evasion in

the residence or foreign country. During 2012, the Swiss Federal Council introduced a series of measures to increase the transparency of the Swiss financial system. Swiss financial institutions need to introduce a customer risk assessment system to ensure that they comply with tax laws in their countries of residence on the reporting and taxation of assets managed through these banks.

The European Union has already introduced a number of measures through the Income from Savings Directive. This Directive implements the exchange of information on any income in the form of interest earned by a resident of an EU country from an EU paying agent. Some countries (Luxembourg, Austria, Belgium) implemented the directive with a transitional period in which they derogated from the exchange of information on the beneficial owner, in return for the 35% interest income tax, applied by the income payer.

The 16th Directive on tax administrative cooperation introduced in 2011 already provided the exchange of information on a series of incomes between EU countries, namely spontaneous, automatic and on-demand information exchange.

Starting with January 1, 2015 automatic exchange of information between EU member states applies to pension, insurance, real estate, labor income, remuneration paid to administrators and other persons assimilated to them. At the same time, the EU will continue to adapt European provisions to international developments. In this respect, the EU has already published a proposal regarding the 16 Directive amendment, by implementing automatic exchange of information on tax solutions issued by Member States.

Directive 2014/107 / EU on automatic exchange of information in the field of taxation is also in the process of implementation, and it concerns the automatic exchange of information along the lines of the common reporting standard (CSR).

The following table presents a summary of changes in international tax legislation between 2010 and 2017.

Table 1

Changes in international tax legislation

Year	Explanation
2010	-USA launches FATCA (Foreign Account Tax Compliance Act); -The first OECD report on offshore voluntary compliance
2011	-Directive 2011/16 / EU on administrative cooperation in the field of taxation (DAC) is adopted, through which Member States' authorities can exchange information, on demand, spontaneously and automatically, from 2015, on earnings, pensions, administration, insurance, real estate properties
2012	- White Money Strategy - Switzerland reforms the financial system and adopts another attitude towards banking secrecy
2013	-OECD issues the BEPS report; -Proposal to amend Directive 2013/34 / EU on the annual financial statements introducing new reporting obligations (country-by-country reporting CbC)
2014	-OECD has launched the full version of the Global Standard for Automatic Information Exchange; -New Directive extending the automatic exchange of information between EU countries on financial revenues; -EC starts investigations into groups of companies (Starbucks - Netherlands, Apple-Ireland, Fiat-Luxembourg)
2015	-EU and Switzerland signed a new agreement for automatic exchange of residents' financial information in 2018; -DAC had a number of proposed modifications; -OECD issues the final BEPS reports; -OECD issues the second report on voluntary offshore compliance
2016	-OECD has launched the standard electronic format for country-to-country reporting (CbC) between jurisdictions; -Special meeting of the OECD Committee on Fiscal Affairs; -European Commission presents the anti-tax evasion package (ATAD Directive)
2017	-European Commission will prepare the list of non-cooperative jurisdictions; -European Commission will publish the Common Consolidated Corporate Tax Base (CCCTB)

Source: PriceWaterHouse Coopers (PwC), Mihaela Mitroi, "Evolution in International Taxation"

As far as Romania is concerned, our country has made significant progress, namely:

- implemented transparency measures;

- introduced in the Tax Code the definition of the artificial transaction;

- the transposition of the Directive on the common tax regime applicable to parent companies and subsidiaries;

- introduces Common Reporting Standard (CRS);

- order the amendment of double taxation avoidance treaties.

About the BEPS Plan

BEPS is the abbreviation for Base Erosion and Profit Shifting. It is a result of globalization, a natural trend to maximize net profits of companies worldwide. It consists of a set of 15 measures developed by the OECD in order to reduce the tendency of multinational companies to transfer profits to low tax jurisdictions or where certain taxes are not applied by using tax strategies based on differences between national tax systems.

These measures mainly aim at:

- aligning the international tax system to the rapid evolution of the digital economy by streamlining the taxation of digital products and services;

- cancel the negative effects of hybrid arrangements and prevent the abusive use of double taxation conventions by eliminating double taxation;

- counteracting harmful tax practices and aggressive tax arrangements by improving transparency and information sharing;

- taxing profits in jurisdictions where value-generating activities are taking place by developing rules that prevent intangible artificial allocation, risks assumed within the group, etc.

In 2014, the following "deliverables" were prepared:

• 2 final reports: A unified understanding of the characteristics of the digital economy and of the risks related to this area and agreed to the separation of the digital economy from other economic segments is impossible. Following consultations with international tax experts, the OECD has concluded that a multilateral international instrument to incorporate BEPS measures into double taxation treaties is feasible and could soon be developed.

• 1 Interim Report: Progress towards transparency and exchange of information on specific tax solutions for certain taxpayers, namely a methodology for establishing substance criteria for intellectual property rights.

• 4 reports with recommendations (project stage):

- a set of recommendations for national legislation and the amendment of the OECD Convention on Hybrid Arrangements;

- clear and comprehensive rules to stop double non-taxation;

- establishing a minimum level of "protection" against the abusive use of double taxation conventions that countries can implement in conventions by including general and specific rules to limit benefits in certain situations;

- Developing guidelines for identifying non-incorporated items and setting trading conditions at market price, as well as allocating intangible profits;

- Developing a country-by-country transfer pricing model containing information on the location of profits, sales, employees and assets, as well as the taxes paid.

The BEPS calendar was as follows:

- June 2012 - announcement / start of the project,

- February 2013 - the first document addressing the phenomenon is issued,

- July 2013 - The Action Plan is issued with 15 measures grouped on 3 pillars (coherence, transparency, substance),

- September 2014 - Issuing final bids for 7 of the 15 actions,

- December 2015 - issuing the final reports for the remaining 8 measures,

- starting with 2016 - monitoring, introducing additional measures.

BEPS actions are explained in table 2.

Table 2

BEPS Actions

Action	Publication year	Description
Action 1. Tax challenges approach in the digital economy	September 2014	Identifies the main issues in the digital economy and desires a holistic approach to both direct and indirect taxes.
Action 2. Neutralizing the effects of artificial arrangements	September 2014	Developing models and recommendations regarding national legislation to combat the use of tools and companies for tax purposes only.
Action 3. Strengthening CFC Rules (Controlled Companies)	2015	Developing recommendations on the form of rules on foreign controlled companies. This measure will also be synchronized with other actions
Action 4. Limiting the base of erosion by deducting interest and other financial payments.	2015	It deals with the use of interest and loans to reduce the taxable base. This action is also correlated with actions directly linked to transfer prices
Action 5. Fighting harmful tax practices more effectively, given the transparency and substance of transactions.	September 2014	This action requires close collaboration with non-OECD countries, as it may also imply a spontaneous exchange of preferential rules.
Action 6. Preventing the granting of benefits through treaties	September 2014	The action aims to clarify that the signed treaties are not intended to cause double non-imposition and proper information of States before signing such a treaty.
Action 7. Prevention of artificial avoidance through the permanent establishment		This document brings changes to the definition of the permanent establishment so as to limit its artificial use.
Action 8. Transfer pricing guide for intangible assets	September 2014	Develop rules to prevent base erosion and transfer profits by moving intangible assets between group members. This will involve: (i) the adoption of a clear and comprehensive definition of intangible assets; (ii) ensuring that profits associated with the transfer and use of intangible assets are appropriately allocated in accordance with value creation; (iii) the development of transfer pricing rules or special measures for intangible transfers that are difficult to assess; (iv) updating guidance on how to contribute to the cost.
Action 9. Risks and capital	2015	Develop rules to prevent base erosion and move profits by transferring risks or allocating excessive capital between group members. This will involve the adoption of transfer pricing rules or special measures to ensure that no additional revenue is earmarked for an entity only because it has contracted or supplied capital. The rules to be developed will also require a revenue modeling based on the value created.
Action 10. Other transactions with high risk	2015	It refers to very rare transactions between third parties. This will entail the adoption of special transfer pricing rules or measures in order to: (i) clarify the circumstances of base erosion and the shift of profit in the transactions that can be reclassified; (ii) clarify the application of pricing methods, in particular the method of profit-sharing, in the context of global value chains; (iii) provide protection against common types of erosion of the tax base, such as administrative and management costs.
Action 11. Establishing methodologies for collecting and analyzing data on BEPS	2015	Develop recommendations on the indicators that will measure the effectiveness of the measures proposed in this plan.
Action 12. The duty of taxpayers to disclose aggressive tax planning arrangements	2015	Provisions on rules that will force businesses to provide information on transactions, arrangements, or structures used in as many countries as possible
Action 13. Transfer pricing documentation guide and country to country report	September 2014	New requirements are being developed in terms of the information provided by both the company in a country and the whole group as a whole
Action 14. Provide more efficient dispute settlement mechanisms	2015	Intends to include clauses on possible problems with a treaty by appealing to arbitration panels
Action 15. Development of a multilateral instrument	September 2014	The Multilateral Instrument is designed to provide an innovative approach to international tax issues, reflecting the nature of the rapid evolution of the global economy and the need for rapid adaptation to this evolution.

Source: Matei, D., Double Taxation Due to Transfer Pricing Adjustments, ABC Working Paper Collection of Financial Worlde , WP nr. 3/2015

Regarding information exchange in Romania, this has been implemented since 1 January 2015 for non-residents of EU Member States who obtained in Romania: labor income; remuneration paid to administrators and other persons assimilated to them; income from life insurance products not covered by other legal instruments of the European Union; income from pensions; income from real estate.

Spontaneous exchange of information (all taxes less VAT, customs duties, excise duties and social contributions) with other Member States occurs in certain situations: the competent authority of a Member State has evidence on the basis of assuming there may be tax losses in another Member State, artificial transfers of profits are made within groups of enterprises, etc.

In view of transparency, Romania has ratified the Convention on Mutual Administrative Assistance in Tax Matters by Law 13/2014. The subject of the Convention is administrative assistance with regard to:

- exchange of information (including simultaneous tax controls and tax controls abroad);

- recovery assistance, including conservation measures;

- submission of documents.

The taxes concerned are taxes on income or on profits and capital gains; mandatory social contributions; taxes on other categories (property, real estate, VAT, any other taxes).

Therefore, BEPS seeks to increase transparency, through international exchange of information, emphasis on the substance of transactions, implements Country by country reporting and anti-tax measures package, tax reports, new anti-abuse rules, amendments to Double Taxation Conventions, cooperates with states through bilateral agreements.

Implications of BEPS in Romania

The measures proposed by the BEPS Action Plan and presented above influence the change of Romanian tax legislation in the field of corporate income tax and withholding tax (ie tightening of rules on the abuse of double taxation avoidance treaties).

As a consequence, the BEPS Action Plan will result in changes to the Model Tax Convention for avoiding double taxation and the Transfer Pricing Guidelines. Even in May 2016, the OECD Council approved changes to the Transfer Pricelines Guidelines to reflect the measures proposed by BEPS (Actions 8-10, Action 13).

In addition, the European Council has recently reached agreement on a draft directive aimed at combating tax evasion practices. The draft directive proposes:

- rules on limiting interest deductibility - are intended to limit the amount of interest that a taxpayer is entitled to deduct in a tax year.

- rules on exit taxation - are designed to prevent the erosion of the tax base in the State of origin when assets including unrealized gains are transferred from the tax jurisdiction of that State without a transfer of ownership.

- a general anti-abusive rule - has the role of combating abusive tax practices.

- the rules on controlled foreign companies (CFCs) - have the role of reallocating the income of a foreign controlled subsidiary subject to a low tax rate to the parent company, usually subject to a higher tax.

- rules on the non-uniform treatment of hybrids - aim at standardizing the qualification of financial instruments and entities.

Nowadays, companies can take advantage of the differences between national tax systems in terms of legal classification and tax treatment of financial instruments or different types of entities in order to reduce tax liabilities. Thus, unequal treatment may lead to double deductions (deductions in both States) or a deduction of income in a State, without including them in the taxable amount in the other State.

The deadline for transposing the above provisions into national law is 31 December 2018, except for the exit tax rules for which the deadline is 31 December 2019. As Romania is a member of the EU, we will face legislative changes in the coming period in the field of corporation tax and withholding tax, in order to reflect the changes made by the draft Directive.

In addition, as a result of the development of the BEPS Action Plan, the Information Exchange Directive has been amended to extend the automatic exchange of information for cross-border tax decisions. Practically, the exchange of information will act on two levels: increasing transparency by reporting taxpayers' information to the authority, and increasing transparency by reporting information between tax authorities in different jurisdictions.

The proposed changes at international level will influence how profits are distributed between jurisdictions, the tax strategies of multinational companies, but also the approach of tax authorities and tax counselors.

Specifically, the main effects of BEPS in Romania may be:

- new definitions of permanent establishments;

- very high transparency in the field of transfer pricing and documentation required on the basis of global requirements;

- the redefinition of intangible assets and the tax impact of their transfer;

- the abolition of traditional tax structures based on any hybrid form - whether we are talking about entities, debts or asset transactions;

- modifying the double taxation treaties to create instruments that can impose taxes where there is suspicion of non-taxation;

- a higher administrative cost;

- changing the arm's length principle in setting intra-group prices to include special measures based on the authorities' concept of where the value is added;

- "Country by Country Reporting" (CbCR) – set of reporting made by multinational groups of companies with incomes over 750 million Euro - will be implemented from 2017 with reference to 2016 data;

- mandatory distribution of taxpayer data - total transparency of the entire organization chart in every tax jurisdiction where the company is doing business;

- Implementing processes that lead to the more rapid prevention or resolution of disputes related to the application of double taxation avoidance treaties;

- redefining harmful tax practices;

- the mandatory transparency of aggressive tax planning.

Conclusions

There are significant changes at international level that will define the new international tax order. We notice a tendency to increase the exchange of information and fiscal transparency, but the changes in the coherence of taxation and the new tax rules are not to be neglected. These changes will certainly affect Romania, especially since some of them are coming as European directives.

Moreover, looking at all the above changes, the BEPS plan is not just a point on the OECD agenda, its principles are essential elements in all governments fiscal policy programs. More and more, the behavior of tax authorities and groups of companies is influenced by the current and expected impact of BEPS.

Romania may be affected by the results of the BEPS report on the amendment of double taxation avoidance conventions by introducing the benefit limiting clause as well as changes to the concept of permanent establishment. Also, changes to domestic legislation can be introduced to highlight the economic substance and purpose of the transactions. We are also expecting changes to the

requirements for transfer pricing documentation in line with the recommendations issued due to the BEPS report.

The new global context therefore means more restrictive fiscal measures, more transparency, but also more bureaucratic reporting procedures to authorities, reduced tax planning and the restriction of deduction rights, as well as stricter forms of control over capital migration and profits.

According to a Deloitte survey, globally, in 2017, multinational groups' representatives consider, overwhelmingly, that the global tax model is in a process of re-establishing on other principles, and the approach of tax authorities within controls become more strictly. Similarly, additional reporting requirements in the transfer pricing area will substantially increase the administrative compliance burden and the authorities will focus, regardless of any legislative changes, on tax audits as a result of the current debate on BEPS.

The impact of 15 BEPS actions will be felt by Romanian companies on two main plans. First, the tax authorities will place more emphasis on the analysis of the economic substance of transactions to the detriment of their form. Secondly, it will increase tax transparency. For this reason, the Romanian tax authorities will have access to the financial and tax information of all entities within a group that parent companies report in their jurisdiction, including their permanent branches / headquarters in Romania. At the same time, Romanian taxpayers have to analyze the business structure to ensure that they comply with the new rules. They also have to pursue more strictly the way corporate profits are taxed, depending on the place where economic activities take place.

Bibliography

Matei, D., 2015, Double Taxation Due to Transfer Pricing Adjustments, ABC Working Paper Collection of Financial Worlde , WP no. 3

Roșca, A., 2015, Taxation Trends in the European and global level. In what direction does taxation go and where do we go?, Taxhouse Taxhand

***, European Commission, 2015, A fair and efficient system of corporate taxation in the European Union: 5 key areas

***, Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee, Proposal for a code of conduct on transfer pricing documentation for associated enterprises in the EU, COM (2005) 543 final, 23.10.2001

***, Council of the European Union, Resolution of the Council and of the Representatives of the Governments of the Member States, meeting within the Council, on a Code of Conduct on transfer pricing documentation for associated enterprises in the European Union, 9738/06, 21.06.2006

***, European Parliament, Promoting good governance in tax matters, INI/2009/2174, 10.02.2010

***, OECD – BEPS http://www.oecd.org/forum/what-the-beps-are-we-talking-about.htm

***, OECD- Sept. 2017 Country by Country Report

***, OECD, 2015, Transfer Pricing Documentation and Country-by-Country Reporting, Action 13 - 2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris

***, OECD, 2010, Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations

***, OCDE, 2008, Model Convention on Income and on Capital

***, OCDE, 2010, Promoting transparency and exchange of information for tax purposes

***, OCDE, 2009, Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrators

***, OECD, Transfer pricing guidelines

***, PriceWaterHouse Coopers (PwC), Mihaela Mitroi, the presentation "Evolution in International Taxation"

***, Taxand Global Survey 2015 - Caught in the crossfire: MNCs prepare for the post-BEPS world

***, Transfer Pricing Services, Romanian legislation on transfer pricing

CONTROL PROCESSES IN HUMAN CAPITAL MANAGEMENT USING PERFORMANCE BENCHMARKING

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Abstract

Human resources control is a methodical process based on decision-making tools and takes into account the evolution of an organization's internal and external environment. The tools and procedures used in this process do not always allow for frequent performance evaluations that would be needed in order to identify useful trends.The difficulty is especially noticeable in case of companies or institutions where the processes are not formally defined and in which the working time is explicitly determined. Similar situations can be found in areas where internal control is less developed or where effective monitoring is not carried out consistently.

The organizations with an insufficiently developed internal control system perform less frequently analyzes and control processes specific to human resources. Suitable tools are also needed within the organizations which have not implemented an adequate internal control system to help managers to identify and implement specific actions according to the organizational context at a certain point in time.

The authors have defined and compared three quantitative analysis tools that can form the foundation for rapid redesign of human resource needs by implementing internal benchmarking. The methods provide managers and internal control practitioners with the possibility to quickly implement specific human capital minimal processes (e.g in planning or redesigning areas) that are neccesary to make real-time decisions, especially in the public sector.

Keywords: human resources redesign, internal control, linear optimization, human capital.

JEL classification: O15, C61, J24

Introduction

Internal control, as a management function, should be rather viewed from a proactive-constructive perspective, having a role of motivating and harmonizing actions rather than from a reactive-destructive perspective, regulating some established anomalies or deficiencies, finding responsible persons and setting penalties or sanctions [1].

In this context, there is also the human resources control which includes the planning, evaluation and control of both the performance of employees and staff working in the human capital field [2]. Employees can be defined as a cost factor, with potential added value and as a stakeholder group [3].

Human resource control helps ensure competitive advantage, facilitates the identification and minimization of risks to which the organization may be exposed, and also creates prerequisites for achieving certain results such as: increasing transparency, improving efficiency and increasing value added or performance [4].

Currently, organizations use specific and well-known tools in the field of human resource control, such as: staff reports, performance measurement systems, balanced scorecard, benchmarking, competence and skills control [5]. Instruments similar to the above mentioned ones are also used as a good practice in the public sector [6].

A practical example in this respect is the enactment by the Romanian Government of Ordinance no. 3/2017 regarding some measures for central public administration. The Ordinance established

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the creation of the Committee for the Analysis of Institutional Organization and Human Resources in the Central Public Administration. The Committee is an advisory body without legal personality, whose main role is to carry out an analysis of the current situation of institutional organization and organizational charts for all public administration authorities and institutions (including deconcentrated entities) and to propose measures for streamlining the management of human resources in the central public administration.

The need for such an analysis is due to the natural need of a self-regulation which implies ensuring a proper correlation between the human resource needs and the activities carried out and which relates to the management-forecasting phase [7].

The content of staff management forecasting consists of a set of well thought-out methodological and analytical efforts to foresee and detect potential issues, to identify trends and patterns, to conceive optimal solutions subsequently materialized in action plans, and to correct actions as tasks are performed. The purpose of predictive staff management is both to ensure the future of the organization and to minimize the impact of inherent risks [8].

Taking into account the current development of the society and the dynamics of some trends in the field of forecasting management there are necessary periodical and often quick, real time analyzes. Therefore, management needs to perform frequently such an analysis in order to determine trends and evaluate impact assessments [9].

In view of the above, the purpose of this study is to operationalize appropriate tools for a quick analysis of the efficient allocation of human resources.

We would like to mention that the present study is only applicable to organizations with a large number of staff and territorial structures (especially in the case of central public institutions that have territorial subunits, deconcentrated entities etc).

Another hypothesis and also another limitation of the study is given by the fact that it is only applicable to organizations which have not developed high level internal control standards or have not defined sound business processes that allow effective worktime and work tasks calculations in a very short time.

Regarding the literature review, we mention the human resources control studies developed by Milkovich and Boudreau (1993) [10].

The use of benchmarking analysis with the aim to compare the organization's substructures and the use of data to improve and then integrate any methods has also been developped in Anderson’s (2016) [11] research papers who identifies the stages of performance analysis by providing the relationships and interdependencies between them.

Likewise, Feigenbaum (1951) [12] uses benchmarking (including internal benchmarking) as a tool of continuous measurement and comparison of business processes.

If we consider the use of benchmarking processes, we must emphasize the data envelopment analysis tool developed by Farrel (1957) [13].

Other recent human resource control studies using such quantitative techniques have been developed by Lotfi (2010) [14] or Ramanathan (2003) [15], and a structured approach to controlling human resources belongs to River (2012) [16] and Olexova (2011) [17].

Description of the Methodology

As stated in the introductory part, this study refers to an organization with a large number of employees, which directly coordinates other territorial units or branches and has not implemented an adequate internal control system.

A hypothesis considered by the authors is that for each subunit the same types of activities are carried out which have specific and well-defined key performance indicators. The study is referring exclusively to these cases.

With regard to specific indicators, a first hypothesis taken into consideration is that they may be performance or effort indicators. Each of these types can provide a clear insight into the status of activities and the amount of work done by an employee.

According to art. 129 of the Labor Code, "The work norm expresses the amount of work required to carry out operations or work tasks by an appropriately qualified person who works at a normal intensity under the conditions of certain technological and working processes".

It should be noted that working norms include productive time, time for interruptions imposed by the technological process and time for legal breaks in the work program.

Work norms shall be drawn up by the employer in accordance with the regulations in force or, in the absence of norms, the working rules shall be developed by the employer after consulting the representative union or, where appropriate, the employees representatives.

A correct assessment of professional performance can not be achieved without normalization of work. Normalization of labor implies difficult analytical processes and analysis of the operations flows.

The present study avoids these analytical processes and bases the decision only on a comparison of the effort made at the level of some subunits affiliated to the same central entity.

The proposed tool offers managers the opportunity to carry out practical and simplified analyzes in order to optimize the allocation of resources even if the normalization of the work has not been fully realized.

The hypothesis from which the authors went was that optimal allocation ensures the achievement of the permanent balance that needs to be ensured between resources (staff numbers) and effort (various indicators that quantify the effort).

As stated above, the diagnosis of organizational goals can be represented by indicators that quantify the effort (e.g the average number of files prepared) or indicators that quantify performance (e.g the number of files drawn up erroneously / the number of files drawn up). In the study we considered the indicators that quantify the effort (which are the basis of the labor standards) and which were generically recorded.

Regarding human resource specific indicators, we can consider both the number of staff per structure (which will be the indicator used in the present study), but also other indicators such as: fluctuation of staff by type (voluntary/involuntary), occupation time of a vacancy, the satisfaction or commitment of staff, the average value of performance ratings etc.

The main activities that take place within organizations have a certain degree of relevance given by a coefficient of importance and can be defined by specific effort indicators. For example, if we consider as an indicator the number of files we have prepared, we can have effort specific indicators for each type of processed file.

These activities can generally be defined in a very minimal way even in general acts of organizations (such as organizational regulations, incorporation documents etc) without adequate analytical development of flows (e.g procedures containing specific tools for managing processes such as business process management that includes the amount of work required, working times etc).

Therefore, even if there is an insufficient internal control development to detail these activities by people, working times, procedures, operations etc, it can be considered as a starting point to allow a minimum analysis specific to human resource control.

If we consider the importance of producing an indicator for an activity, we can give grades from 1 to 10 that represents the importance coefficients. Obviously, the effort indicators considered can be constructed for different periods and can be represented as in table 1 below.

Table 1

Database with indicators

Indicator	Period 1	Period 2	.....	Period n
Indicator 1	a_{11}	a_{12}		a_{in}
Indicator 2	a_{21}	a_{22}		a_{2n}
Indicator n	a_{n1}	a_{n2}		a_{nn}

Source: Authors own research results.

Another limitation of the study is given by the fact that the analysis was performed by internal benchmarking only for the dataset of a single time period. In later developments the study will be extended with cross-sectional data providing a dynamic analysis.

We considered that for each subunit we have defined the matrix with the indicators described above and the number of job positions that represent the human resource specific indicator as outlined above. The data set for the analysis will encompass the number of staff for each substructure, the related effort indicators and the importance coefficients. In order to achieve the benchmarking goal, the models followed (as we considered as a hypothesis) an optimal relationship between the resources (number of job positions) and the achievement of certain activities.

A first approach to an internal benchmarking process was to determine the number of positions calculated by weighing the effort for each type of activity through a model using a scorecard [18]. Such a model is based on the fact that the sum of the products between the coefficients (which adds up to 100%) and the indicators can be weighted with the total, resulting another aggregate indicator that measures the number of staff for each structure, given the total number of jobs available. Obviously, the model can be extended to several measures. However, for simplicity of representation we will still consider that there is only one measure.

To exemplify such an approach in table 2 below we have considered a model in which it is analyzed the number of positions in each substructure, relative to a total number of possible positions and to specific effort indicators. Therefore, the first column presents a case where a number of jobs are assigned to the subunits, and in the following columns are represented the effort indicators and the weights of the activities types for each subunit.

The sum for each subunit resulted by multiplying every indicator and its weight determines an aggregate indicator against which can be weighed the number of optimized staff relative to the total number of jobs. The column of the weighted amounts to the total weights amount represents the ratio between the sum of the indicators and their weight for each subunit and the sum of all these partial amounts. The indicator determines a number of calculated positions (if the total number of job positions is considered constant), which can be compared to the number of existing positions, resulting a gap that determines the areas in which the human resource is in excess compared to other subunits. This gap may be the basis for subunit redistribution of staff that is operative and assures efficiency.

If we assume, for example, that there are 5 types of activities marked with activity 1 through activity 5, the calculations using the indicators and weights can be presented according to table 2 below.

The result of the above model provides a first way to establish a gap between the job positions that should exist at territorial structures (the number of jobs calculated by optimization according to the scorecard model) and the number of existing jobs. Thus, the positive values in the difference column indicate an additional need for human resources which can be distributed from the subunits that record the highest negative values in absolute value.

As a mathematical representation, we can conclude that the number of job positions calculated with this method is given by the equation:

$n_i = N \times (\sum i_i \times c_j) / (\sum(\sum i_i \times c_j))$

where N – total number of job positions

i_i – the effort indicator for each subunit

c_j – the coefficient for each indicator with $\sum c_j = 1$

A second approach used a linear optimization algorithm. The concept of optimization is well-established as the core principle in the analysis of complex decision-making or allocation issues. Within this concept, an objective is maximized or minimized and subject to restrictions limiting the choice of decision variables.

Table 2

Scorecard aggregation model

Job Positions	Process Effort Indicator 1	Process Effort Indicator 2	Process Effort Indicator 3	Process Effort Indicator 4	Process Effort Indicator 5	Weight Process 1	Weight Process 2	Weight Process 3	Weight Process 4	Weight Process 5	Amount Effort Indicatos x Weights	Weight Amount Effort Indicators / Total Amount of Weights	Computed job positions	Difference between the Calculated and Existent Job Positions
13	150.0	1386.0	149.0	66.4	119.6	6	2	6	10	8	6187.512168	0.02149395	11	-2
15	61.0	1366.2	110.0	80.1	97.5	6	2	6	10	8	5338.576879	0.01854495	10	-5
11	223.2	2270.5	374.0	97.1	217.3	6	2	6	10	8	10834.22056	0.037635513	19	8
14	312.6	2182.6	159.6	50.6	168.2	6	2	6	10	8	9050.212857	0.031438293	16	2
11	207.4	2193.3	306.7	88.0	250.6	6	2	6	10	8	10356.71396	0.035976768	19	8
12	26.7	738.2	114.7	28.2	136.2	6	2	6	10	8	3696.690121	0.012841425	7	-5
11	113.8	1758.8	178.3	47.5	70.9	6	2	6	10	8	6312.351853	0.021927613	11	0
9	106.8	1108.4	128.4	44.9	68.0	6	2	6	10	8	4620.551066	0.016050699	8	-1
16	128.4	1185.8	203.9	127.1	241.6	6	2	6	10	8	7569.745376	0.0262955	14	-2
15	142.9	1531.2	361.8	46.4	114.0	6	2	6	10	8	7466.030167	0.025935218	13	-2
14	105.2	888.0	288.5	39.3	74.5	6	2	6	10	8	5127.557941	0.01781192	9	-5
12	43.7	1021.6	41.7	25.2	52.7	6	2	6	10	8	3228.77792	0.011216009	6	-6
19	124.3	2132.4	99.7	274.0	184.0	6	2	6	10	8	9820.642308	0.034114582	18	-1
11	168.1	1994.7	251.5	177.2	255.0	6	2	6	10	8	10318.79589	0.03584505	19	8
11	144.4	730.8	72.2	25.2	77.7	6	2	6	10	8	3635.350672	0.012628346	7	-4
11	188.0	1724.8	370.2	81.4	168.8	6	2	6	10	8	8963.214825	0.031136083	16	5
12	404.9	2094.4	311.8	43.2	147.8	6	2	6	10	8	10103.25939	0.035096327	18	6
16	120.9	1986.5	262.3	69.4	156.4	6	2	6	10	8	8216.993207	0.028543886	15	-1
10	99.4	848.8	234.7	45.2	73.8	6	2	6	10	8	4744.740785	0.016482104	9	-1
11	96.8	1698.7	189.6	25.7	94.2	6	2	6	10	8	6126.80878	0.021283081	11	0
12	183.6	1284.6	184.3	49.8	130.9	6	2	6	10	8	6321.324397	0.021958782	11	-1
13	125.5	1560.9	116.7	37.8	103.9	6	2	6	10	8	5784.3549	0.020093477	10	-3
11	124.5	767.4	118.7	25.0	68.8	6	2	6	10	8	3793.962535	0.013179326	7	-4
14	189.1	1484.9	389.9	215.9	229.0	6	2	6	10	8	10434.65747	0.036247525	19	5
13	15.3	779.8	54.2	325.5	180.4	6	2	6	10	8	6674.276267	0.023184853	12	-1
13	64.3	2064.4	126.9	61.8	133.6	6	2	6	10	8	6962.154371	0.024184873	13	0
9	211.6	1012.9	308.8	35.3	48.9	6	2	6	10	8	5892.061538	0.020467624	11	2
13	198.1778	1815.606	349.7335	79.95733	212.4227	6	2	6	10	8	9417.634412	0.032714629	17	4
12	118.8393	1817.974	313.6397	29.18904	144.0043	6	2	6	10	8	7674.748081	0.026660255	14	2
13	179.9004	1860.654	442.7729	47.28276	94.2149	6	2	6	10	8	8683.893852	0.030165788	16	3
15	152.6639	2848.202	533.4059	104.5427	241.9937	6	2	6	10	8	12794.19923	0.044444014	23	8
11	150.0098	948.2073	107.6531	29.68011	67.68958	6	2	6	10	8	4280.709324	0.014870169	8	-3
10	64.90337	1115.881	125.6535	104.0555	113.3312	6	2	6	10	8	5322.307969	0.018488436	10	0
15	123.0081	1082.327	241.8283	86.09029	157.8861	6	2	6	10	8	6477.663739	0.022501868	12	-3
16	165.8395	2711.559	538.9866	70.87008	216.0978	6	2	6	10	8	12089.55709	0.041996254	22	6
11	222.5805	1304.021	279.1892	23.53382	66.52198	6	2	6	10	8	6386.175205	0.022184058	11	0
14	35.92248	1932.943	49.34111	147.7843	223.0844	6	2	6	10	8	7639.985205	0.026539497	14	0
12	57.4298	638.5181	31.96826	19.28789	61.05654	6	2	6	10	8	2494.755766	0.00866619	4	-8
11	151.379	1500.489	410.7938	26.43159	84.04039	6	2	6	10	8	7310.6534	0.025395476	13	2
15	182.0067	769.9873	321.893	20.68743	91.8213	6	2	6	10	8	5504.817239	0.01912243	10	-5
11	139.3557	1012.745	52.60631	32.43864	88.99779	6	2	6	10	8	4213.631971	0.014637158	8	-3
518	5824.299	61155.88	9307.682	3054.978	5527.355	246	82	246	410	328	287872.2707	1	521	3

Source: Authors own research results.

The formulation of the optimization problem involves identifying a balance between building a sufficiently complex model to better describe the problem and the ease of solving it. The Simplex method for solving linear programming problems, introduced in 1947 by George B. Dantzig [19] is, in essence, a matrix method.

Specifically, in relation to the problem addressed in the study, this tool can seek to find a required number of jobs that minimize the difference between the number of available positions on each substructure and the number of calculated jobs. This involves building a model that flattens the differences between the number of jobs calculated for each subunit, relative to the number of jobs existing at a certain time.

The model starts from the hypothesis that the number of positions required is proportional to the same coefficient and the weighted sum of the values of each effort indicator. The function objective of the simplex algorithm becomes the minimization of the squares of the differences between the calculated jobs and the existing jobs.

Hence, the calculated number of staff $_i$ can be written as a single coefficient (k) multiplied by a sum of products (a x indicator 1_i + b x indicator 2_i + c x indicator 3_i + d x indicator 4_i + e x indicator 5_i), where a, b, c, d, e are the weighting coefficients for each indicator. Therefore, the simplex algorithm will look for that value (k) that minimizes the differences between the number of staff calculated with the above formula and the number of existing staff.

We present in table 3 below the simplex model for the same data used in the first model. The model was developed using the MS Excel Solver tool.

From the analysis of table 3 we note that, as in the first case, the result of the model provides a difference between the jobs that should exist and the number of existing jobs.

Table 3

The aggregation model using the simplex algorithm

Subunit	Existing Jobs	Process Effort Indicator 1	Process Effort Indicator 2	Process Effort Indicator 3	Process Effort Indicator 4	Process Effort Indicator 5	Weight Process 1	Weight Process 2	Weight Process 3	Weight Process 4	Weight Process 5	Product Indicator x Weight 1	Product Indicator x Weight 2	Product Indicator x Weight 3	Product Indicator x Weight 4	Product Indicator x Weight 5	Calculated Jobs	Difference
1	13	150.0	1386.0	149.0	66.4	119.6	6	2	6	10	8	899.8018	2771.938	894.2666	664.4951	957.0102	11	2
2	15	61.0	1366.2	110.0	80.1	97.5	6	2	6	10	8	365.7704	2732.393	659.9907	800.7705	779.6528	10	5
3	11	223.2	2270.5	374.0	97.1	217.3	6	2	6	10	8	1339.242	4541.034	2244.089	971.0581	1738.798	19	-8
4	14	312.6	2182.6	159.6	50.6	168.2	6	2	6	10	8	1875.763	4365.28	957.6635	505.593	1345.914	16	-2
5	11	207.4	2193.3	306.7	88.0	250.6	6	2	6	10	8	1244.611	4386.689	1840.437	879.7878	2005.189	19	-8
6	12	26.7	738.2	114.7	28.2	136.2	6	2	6	10	8	160.4972	1476.449	688.0875	282.3709	1089.285	7	5
7	11	113.8	1758.8	178.3	47.5	70.9	6	2	6	10	8	682.9583	3517.517	1070.014	474.7886	567.0735	11	0
8	9	106.8	1108.4	128.4	44.9	68.0	6	2	6	10	8	640.5487	2216.783	770.4457	448.8132	543.9608	8	1
9	16	128.4	1185.8	203.9	127.1	241.6	6	2	6	10	8	770.6423	2371.7	1223.655	1271.09	1932.659	14	2
10	15	142.9	1531.2	361.8	46.4	114.0	6	2	6	10	8	857.2075	3062.471	2170.686	464.0557	911.6097	13	2
11	14	105.2	888.0	288.5	39.3	74.5	6	2	6	10	8	631.0621	1775.935	1730.986	393.4569	596.1179	9	5
12	12	43.7	1021.6	41.7	25.2	52.7	6	2	6	10	8	261.9382	2043.118	250.3626	252.0627	421.2967	6	6
13	19	124.3	2132.4	99.7	274.0	184.0	6	2	6	10	8	745.685	4264.837	598.3748	2739.759	1471.986	18	1
14	11	168.1	1994.7	251.5	177.2	255.0	6	2	6	10	8	1008.429	3989.44	1508.989	1771.961	2039.977	19	-8
15	11	144.4	730.8	72.2	25.2	77.7	6	2	6	10	8	866.638	1461.651	433.3423	251.956	621.7629	7	4
16	11	188.0	1724.8	370.2	81.4	168.8	6	2	6	10	8	1128.158	3449.644	2221.284	813.9852	1350.144	16	-5
17	12	404.9	2094.4	311.8	43.2	147.8	6	2	6	10	8	2429.557	4188.833	1870.681	431.9371	1182.252	18	-6
18	16	120.9	1986.5	262.3	69.4	156.4	6	2	6	10	8	725.2077	3973.036	1574.09	693.771	1250.889	15	1
19	10	99.4	848.8	234.7	45.2	73.8	6	2	6	10	8	596.2855	1697.66	1408.472	451.6929	590.6307	9	1
20	11	96.8	1698.7	189.6	25.7	94.2	6	2	6	10	8	581.0311	3397.335	1137.51	257.1567	753.7761	11	0
21	12	183.6	1284.6	184.3	49.8	130.9	6	2	6	10	8	1101.382	2569.231	1105.574	498.3267	1046.811	11	1
22	13	125.5	1560.9	116.7	37.8	103.9	6	2	6	10	8	753.2785	3121.833	700.1273	378.3056	830.8103	10	3
23	11	124.5	767.4	118.7	25.0	68.8	6	2	6	10	8	746.9385	1534.746	712.1364	250	550.1414	7	4
24	14	189.1	1484.9	389.9	215.9	229.0	6	2	6	10	8	1134.468	2969.784	2339.175	2158.951	1832.278	19	-5
25	13	15.3	779.8	54.2	325.5	180.4	6	2	6	10	8	91.62175	1559.607	325.1075	3254.627	1443.313	12	1
26	13	64.3	2064.4	126.9	61.8	133.6	6	2	6	10	8	385.5862	4128.787	761.1604	617.7746	1068.847	12	1
27	9	211.6	1012.9	308.8	35.3	48.9	6	2	6	10	8	1269.391	2025.804	1852.593	352.9186	391.3557	11	-2
28	13	198.2	1815.6	349.7	79.96	212	6	2	6	10	8	1189.067	3631.211	2098.401	799.5733	1699.382	17	-4
29	12	118.8	1818	313.6	29.19	144	6	2	6	10	8	713.036	3635.949	1881.838	291.8904	1152.035	14	-2
30	13	179.9	1860.7	442.8	47.28	94.2	6	2	6	10	8	1079.402	3721.307	2656.637	472.8276	753.7192	16	-3
31	15	152.7	2848.2	533.4	104.5	242	6	2	6	10	8	915.9834	5696.404	3200.436	1045.427	1935.949	23	-8
32	11	150	948.21	107.7	29.68	67.7	6	2	6	10	8	900.0586	1896.415	645.9184	296.8011	541.5166	8	3
33	10	64.9	1115.9	125.7	104.1	113	6	2	6	10	8	389.4202	2231.762	753.9212	1040.555	906.6499	10	0
34	15	123	1082.3	241.8	86.09	158	6	2	6	10	8	738.0486	2164.654	1450.97	860.9029	1263.089	12	3
35	16	165.8	2711.6	539	70.87	216	6	2	6	10	8	995.0372	5423.117	3233.919	708.7008	1728.783	22	-6
36	11	222.6	1304	279.2	23.53	66.5	6	2	6	10	8	1335.483	2608.043	1675.135	235.3382	532.1759	11	0
37	14	35.92	1932.9	49.34	147.8	223	6	2	6	10	8	215.5349	3865.886	296.0467	1477.843	1784.675	14	0
38	12	57.43	638.52	31.97	19.29	61.1	6	2	6	10	8	344.5788	1277.036	191.8096	192.8789	488.4523	4	8
39	11	151.4	1500.5	410.8	26.43	84	6	2	6	10	8	908.2741	3000.978	2464.763	264.3159	672.3232	13	-2
40	15	182	769.99	321.9	20.69	91.8	6	2	6	10	8	1092.04	1539.975	1931.358	206.8743	734.5704	10	5
41	11	139.4	1012.7	52.61	32.44	89	6	2	6	10	8	836.1344	2025.491	315.6379	324.3864	711.9823	8	3

Source: Authors own research results.

The negative values in the difference column indicate an additional need for human resources that can be distributed from the subunits that record positive values. As a mathematical representation we can say that the number of positions calculated by this method is given by the solution of the minimum equation which determines a coefficient (k) leading to the minimization:

Min $(n_{ic}-n_{ir})^2$ provided that:

$n_{ic} = k \times (\sum i_i \times c_j) / (\sum(\sum i_i \times c_j))$

where N – total number of jobs

nic – the number of calculated jobs nic > 0

n_{ir} – number of existing jobs $n_{ir} > 0$

i_i – the effort indicator for each subunit

c_j – the coefficient for each indicator with $\sum c_j = 1$

A third model proposed by the authors consists of using the data envelopment analysis (DEA). DEA is a nonparametric method used in operational research that is applied to empirically measure the productive efficiency of production units. It is a simple benchmarking tool and relative efficiency measurement method [20].

In this case, given the fact that we are investigating the efficiency of staff needs planning, we used an input-oriented model. The model was applied to the input variable - number of existing jobs - and used a single output variable given by the weighted sum of the performance indicators for each structure calculated similarly to the models presented above.

According to the specific data envelopment methodology it was obtained a new indicator for each subunit called technical efficiency (te_i). The number of job positions calculated using this method were determined according to the formula below:

Calculated jobs = existing jobs + (te_i - average te_i) x existing jobs.

Table 4

The aggreagation model using data envelopment

Subunit	Existing Jobs	Process Effort Indicator 1	Process Effort Indicator 2	Process Effort Indicator 3	Process Effort Indicator 4	Process Effort Indicator 5	Weight Process 1	Weight Process 2	Weight Process 3	Weight Process 4	Weight Process 5	Product Indicator x Weight 1	Product Indicator x Weight 2	Product Indicator x Weight 3	Product Indicator x Weight 4	Product Indicator x Weight 5	The Sum of the Products	TE	Calculated Jobs	Differences
1	13	150.0	1386.0	149.0	66.4	119.6	6	2	6	10	8	900	2772	894	664	957	6188	0.563	12	1
2	15	61.0	1366.2	110.0	80.1	97.5	6	2	6	10	8	366	2732	660	801	780	5339	0.416	12	3
3	11	223.2	2270.5	374.0	97.1	217.3	6	2	6	10	8	1339	4541	2244	971	1739	10834	0.789	13	-2
4	14	312.6	2182.6	159.6	50.6	168.2	6	2	6	10	8	1876	4365	958	506	1346	9050	0.678	15	-1
5	11	207.4	2193.3	306.7	88.0	250.6	6	2	6	10	8	1245	4387	1840	880	2005	10357	0.779	13	-2
6	12	26.7	738.2	114.7	28.2	136.2	6	2	6	10	8	160	1476	688	282	1089	3697	0.325	8	4
7	11	113.8	1758.8	178.3	47.5	70.9	6	2	6	10	8	683	3518	1070	475	567	6312	0.638	11	0
8	9	106.8	1108.4	128.4	44.9	68.0	6	2	6	10	8	641	2217	770	449	544	4621	0.595	9	0
9	16	128.4	1185.8	203.9	127.1	241.6	6	2	6	10	8	771	2372	1224	1271	1933	7570	0.561	15	1
10	15	142.9	1531.2	361.8	46.4	114.0	6	2	6	10	8	857	3062	2171	464	912	7466	0.582	15	0
11	14	105.2	888.0	288.5	39.3	74.5	6	2	6	10	8	631	1776	1731	393	596	5128	0.432	11	3
12	12	43.7	1021.6	41.7	25.2	52.7	6	2	6	10	8	262	2043	250	252	421	3229	0.227	7	5
13	19	124.3	2132.4	99.7	274.0	184.0	6	2	6	10	8	746	4265	598	2740	1472	9821	0.598	19	0
14	11	168.1	1994.7	251.5	177.2	255.0	6	2	6	10	8	1008	3989	1509	1772	2040	10319	0.778	13	-2
15	11	144.4	730.8	72.2	25.2	77.7	6	2	6	10	8	867	1462	433	252	622	3635	0.371	8	3
16	11	188.0	1724.8	370.2	81.4	168.8	6	2	6	10	8	1128	3450	2221	814	1350	8963	0.745	12	-1
17	12	404.9	2094.4	311.8	43.2	147.8	6	2	6	10	8	2430	4189	1871	432	1182	10103	0.753	14	-2
18	16	120.9	1986.5	262.3	69.4	156.4	6	2	6	10	8	725	3973	1574	694	1251	8217	0.595	16	0
19	10	99.4	848.8	234.7	45.2	73.8	6	2	6	10	8	596	1698	1408	452	591	4745	0.562	9	1
20	11	96.8	1698.7	189.6	25.7	94.2	6	2	6	10	8	581	3397	1138	257	754	6127	0.627	11	0
21	12	183.6	1284.6	184.3	49.8	130.9	6	2	6	10	8	1101	2569	1106	498	1047	6321	0.605	12	0
22	13	125.5	1560.9	116.7	37.8	103.9	6	2	6	10	8	753	3122	700	378	831	5784	0.533	12	1
23	11	124.5	767.4	118.7	25.0	68.8	6	2	6	10	8	747	1535	712	250	550	3794	0.397	8	3
24	14	189.1	1484.9	389.9	215.9	229.0	6	2	6	10	8	1134	2970	2339	2159	1832	10435	0.721	15	-1
25	13	15.3	779.8	54.2	325.5	180.4	6	2	6	10	8	92	1560	325	3255	1443	6674	0.595	13	0
26	13	64.3	2064.4	126.9	61.8	133.6	6	2	6	10	8	386	4129	761	618	1069	6962	0.612	13	0
27	9	211.6	1012.9	308.8	35.3	48.9	6	2	6	10	8	1269	2026	1853	353	391	5892	0.682	9	0
28	13	198.2	1815.6	349.7	80	212.4	6	2	6	10	8	1189	3631	2098	800	1699	9418	0.713	14	-1
29	12	118.8	1818	313.6	29.2	144	6	2	6	10	8	713	3636	1882	292	1152	7675	0.675	13	-1
30	13	179.9	1860.7	442.8	47.3	94.21	6	2	6	10	8	1079	3721	2657	473	754	8684	0.689	14	-1
31	15	152.7	2848.2	533.4	105	242	6	2	6	10	8	916	5696	3200	1045	1936	12794	0.756	17	-2
32	11	150	948.21	107.7	29.7	67.69	6	2	6	10	8	900	1896	646	297	542	4281	0.466	9	2
33	10	64.9	1115.9	125.7	104	113.3	6	2	6	10	8	389	2232	754	1041	907	5322	0.609	10	0
34	15	123	1082.3	241.8	86.1	157.9	6	2	6	10	8	738	2165	1451	861	1263	6478	0.519	14	1
35	16	165.8	2711.6	539	70.9	216.1	6	2	6	10	8	995	5423	3234	709	1729	12090	0.725	18	-2
36	11	222.6	1304	279.2	23.5	66.52	6	2	6	10	8	1335	2608	1675	235	532	6386	0.642	11	0
37	14	35.92	1932.9	49.34	148	223.1	6	2	6	10	8	216	3866	296	1478	1785	7640	0.619	14	0
38	12	57.43	638.52	31.97	19.3	61.06	6	2	6	10	8	345	1277	192	193	488	2495	0	5	7
39	11	151.4	1500.5	410.8	26.4	84.04	6	2	6	10	8	908	3001	2465	264	672	7311	0.687	12	-1
40	15	182	769.99	321.9	20.7	91.82	6	2	6	10	8	1092	1540	1931	207	735	5505	0.433	12	3
41	11	139.4	1012.7	52.61	32.4	89	6	2	6	10	8	836	2025	316	324	712	4214	0.457	9	2
																	AVG	0.579		

Source: Authors own research results.

In this case too, the result of the model is given by a gap between the jobs that should exist within the territorial structures (number of jobs calculated) and the jobs that could be optimized according to the data envelopment model in relation to the number of existing jobs. Consequently, for subunits with negative differences it is necessary to redistribute staff from the other subunits.

If we compare the three methods of analysis used, there is a correlation of over 85% between the three methods, indicating the convergence of analysis methods. This is true even if the correlation between the initial data and the results of each model is not correlated (the correlation coefficient is 0.39).

Table 5

Correlation analysis

	Existing Jobs	Method 1. **Scorecard**	Method 2. **Linear optimization**	Method 3. **DEA**
Existing Jobs	1			
Method 1. **Scorecard**	0.394373389	1		
Method 2. **Linear optimization**	0.375774758	0.994421654	1	
Method 3. **DEA**	0.732130826	0.856782218	0.849750149	1

Source: Authors own research results.

The conclusions that these models offer can lead to a coherent managerial decision based on a quantitative analysis support that basically consists of resizing the subunits according to the effort required to achieve the business objectives. Synthesizing the results of the three models used, decision makers can build the managerial decision as shown in table 6 below.

Table 6

Conclusions of the models used

Subunit	Existing Jobs	Method 1 Scorecard	Method 2 Linear optimization	Method 3 DEA	Conclusion
1	13	11	11	12	decrease
2	15	10	9	12	decrease
3	11	19	19	13	increase
4	14	16	16	15	increase
5	11	19	18	13	increase
6	12	7	6	8	decrease
7	11	11	11	11	no change
8	9	8	8	9	no change
9	16	14	13	15	decrease
10	15	13	13	15	decrease
11	14	9	9	11	decrease
12	12	6	5	7	decrease
13	19	18	17	19	decrease
14	11	19	18	13	increase
15	11	7	6	8	decrease
16	11	16	16	12	increase
17	12	18	18	14	increase
18	16	15	14	16	decrease
19	10	9	8	9	decrease
20	11	11	10	11	no change
21	12	11	11	12	decrease
22	13	10	10	12	decrease
23	11	7	6	8	decrease
24	14	19	18	15	increase
25	13	12	11	13	decrease
26	13	13	12	13	no change
27	9	11	10	9	no change
28	13	17	16	14	incrrease
29	12	14	13	13	increase
30	13	16	15	14	increase
31	15	23	22	17	increase
32	11	8	7	9	decrease
33	10	10	9	10	no change
34	15	12	11	14	decrease
35	16	22	21	18	increase
36	11	11	11	11	no change
37	14	14	13	14	decrease
38	12	4	4	5	decrease
39	11	13	13	12	increase
40	15	10	9	12	decrease
41	11	8	7	9	decrease

Source: Authors own research results.

The analysis from table 6 above reveals the possibility of taking a decision to optimize the number of staff in the territorial structures based on a formal analysis that takes into account autobenchmarking. The table also reveals a convergence of the solutions given by the three models, as evidenced by the covariance analysis.

The authors consider that this calculation model is useful for conducting a quick test of entities having territorial structures or branches with operations of a similar nature, especially in cases where the specific information given by the internal control system is not sufficient to carry out an in-depth analytical analysis.

Conclusions

The study presents three quantitative human resource analysis models that can be used simultaneously in organizations with a high number of staff, which have several subunits of the same type in the organizational structure and do not have a high developped internal control system. The study also provides a useful and practical tool for human resource specific control processes and redistribution of staff.

The models consist of different aggregation of effort indicators using a scorecard, a simplex algorithm and data envelopment analysis.

Analyzes can give management a real-time signal without requiring a specific human resource analysis, basically being a quick test of optimal design or resizing of human resources structures.

The research demonstrated the convergence of the three types of models in the sense of indicating the direction of reorganizing some staff structures.

The limitation of the study is given by the type of organization considered by the authors (institution with a large number of employees, homogeneous substructures and an insufficiently developed internal control system), where it is possible to develop autobenchmarking processes.

At the same time, other limitations of the study are given by the fact that the effort indicators are specific for every organization and by the fact that the data were analyzed at a single point in time.

Subsequent research directions will consist of the creation of panel data models that will include the variation in Malmquist Total Factor Productivity. The model will also include the performance indicators not only the effort indicators. Moreover, the approach will encompass the mechanism design theory for structural analysis itself.

Bibliography

Anderson, D.R., Sweeney, D.J., Williams, Th. A., (2016). An Introduction to Management Science, Quantitative Approaches to Decision Making, Cengage Learning Customer & Sales Support, 1-800-354-9706 ISBN 9781111823610. [11]

Banker, R.D., Morey, R.C., (1986). Efficiency Analysis for Exogenously Fixed Inputs and Outputs, Operations Research, 34(4), 513-521. Retrieved from http://dx.doi.org/10.1287/opre.34.4.513. [9]

Charnes, A., Cooper, W.W., Rhodes, E.L., (1978). Measuring the efficiency of decision-making units, European Journal of Operational Research, 2(6), 429-444. Retrieved from http://dx.doi.org/10.1016/0377-2217(78)90138-8. [18]

Coelli, T., Rao, D.S.P., Battese, G.E., (1998). An Introduction to Efficiency and Productivity Analysis, Boston, MA: Kluwer Academic Publishers. [20]

Cole, G.A., (2000). Personnel Management, Codecs Publishing House, Bucharest. [4]

Condrey, S.E., (1998). Handbook of Human Resource Management in Government, San Francisco, Jossey-Bass Publishers. [6]

Dantzig, G., (1963). Linear programming and extensions, Princeton University Press. [19]

Dugelova, M., Strenitzerova, M., (2014). The possibility of implementation the personnel controlling in computer programming and consultancy companies. In Michael McGreevy, Robert Rita (Eds.), CER Comparative European Research 2014 (pp. 27-30), London: Sciemcee. [1]

Farrell, M.J., (1957). The Measurement of Productive Efficiency, Journal of the Royal Statistical Society, 120(3), 253-281. [13]

Feigenbaum, A.V., (1951). Quality control: Principles, practice and administration: An industrial management tool for improving product quality and design and for reducing operating costs and losses, McGraw-Hill. [12]

Kaplan, J., (2009). International Barometer of HR Response to Economic Downturn. Retrieved from http://www.networkace.com/BarometerReport.pdf (accessed on 15.09.2017). [2]

Lotfi, F.H., Shirouzehyad, H., (2010). Analyzing Efficiency of Human Resource Performance Using Data Envelopment Analysis: A case study, 1st Conference on executive MBA. [14]

Milkovich, G., Boudreau, J., (1993). Human Resource Management, McGraw-Hill Higher Education, ISBN 10: 0256116083, ISBN 13: 9780256116083. [10]

Noe, R.A., (2012). Human resource management: Gaining a competitive advantage, New York, NY, McGraw-Hill. [5]

Olexova, C., (2011). Nástroje personálneho controllingu, Scientific papers of the University Pardubice, Series D, 2011(20), 11-125. [17]

Pastor, I., Petelean, A., (2004). Principles of modern management, Dacia Publishing House, Cluj-Napoca. [7]

Popa, I., (2004). Strategic Management, Economica Publishing House, Bucharest. [3]

Robbins, S.P., Judge, T.A., (2011). Organizational behavior (14th ed.), Upper Saddle. [8]

Ramanathan, R., (2003). An introduction to data envelopment analysis: A tool for performance measurement, New Delhi: Sage Publication India Private Ltd. Schaffer. [15]

River, N.J., (2012). Handbook for job analysis, Prentice Hall. International Journal of Management, Business, and Administration. U.S. Department of Labor. Washington, DC: U.S. Government Printing Office. [16]

EVALUATION OF RESEARCH FUNDING IN NORTH DAKOTA STATE UNIVERSITY

Thomas I. WAHL[110], [111], PhD

Abstract

In the 2016 annual research report with a commitment of excellence, we supported the efforts of our faculty to obtain external funding to support research and scientific priorities in order to promote their respective academic fields. The North Dakota State University (NDSU), students and staff have been and are encouraged to engage in research that extends the limits of scientific discovery, making a difference in the lives of our citizens. NDSU exemplifies diversity in our research and creative activities, ranging from the use of unmanned aerial vehicles in precision agriculture, controlled delivery of pharmaceuticals, disease resistance in crops, and the expansion of high-performance and advanced-research computing capabilities.

At NDSU, faculty have been encouraged to work together on interdisciplinary teams to solve grand challenges, with a focus on three identified areas: food systems and security; healthy populations and vital communities; and sustainable energy, environment and societal infrastructure. These teams build upon the strengths of the university and also create opportunities for strategic collaborations with industry and other partners, all while being cognizant of the needs in our state.

As we work to continuously enhance the external sponsored funding awarded to the outstanding faculty, students and staff at NDSU, we pause to celebrate the successes of the past year. This report provides an abbreviated quantitative snapshot of FY2016 awards.

Keyword: financial support of the research, education and strategic collaborations

JEL classification: I22, I23

Introduction

With a commitment to excellence, we support the pursuits of our faculty in obtaining external funding to support their research and scholarly activity priorities in order to advance their respective academic fields. Faculty, students and staff at NDSU are encouraged to engage in research that expands the boundaries of scientific discovery, making a difference in the lives of our citizens. NDSU exemplifies diversity in our research and creative activities, ranging from the use of unmanned aerial vehicles in precision agriculture, controlled delivery of pharmaceuticals, disease resistance in crops, and the expansion of high-performance and advanced-research computing capabilities (Manta O., 2017).

Results

At NDSU, faculty have been encouraged to work together on interdisciplinary teams to solve grand challenges, with a focus on three identified areas: food systems and security; healthy populations and vital communities; and sustainable energy, environment and societal infrastructure.

These teams build upon the strengths of the university and also create opportunities for strategic collaborations with industry and other partners, all while being cognizant of the needs in our state.

As we work to continuously enhance the external sponsored funding awarded to the outstanding faculty, students and staff at NDSU, we pause to celebrate the successes of the past year. This report provides an abbreviated quantitative snapshot of FY2016 awards.

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Table 1

Breakdown of external awards and federal formula funds

	FY 2014	FY 2015*	FY 2016
External Awards	$64,103,594	$65,486,657	$70,620,367
Total External Awards	*$64,103,594*	*$65,486,657*	*$70,620,367*
Hatch/McIntire-Stennis Funds	$3,223,580	$3,184,546	$3,184,348
Extension Service Smith-Lever Formula Funds	$3,906,862	$3,920,040	$3,919,415
Student Financial Aid	$11,210,498	$11,021,451	$10,530,068
Total Federal Formula Funds	*$18,340,940*	*$18,126,037*	*$17,633,831*
Grand Total	**$82,444,534**	**$83,612,694**	**$88,254,198**

Source: NDSU

Note: By the numbers, for FY2016, we noted a 7.8 percent increase in external awards over FY15, with growth in the areas of federal and state funding over the previous year. Estimated R&D expenditures reported to the National Science Foundation total $156.3 million for NDSU in FY2016.

** Adjustments were made to the previously published FY 2015 External Awards total. The adjusted total is included here.*

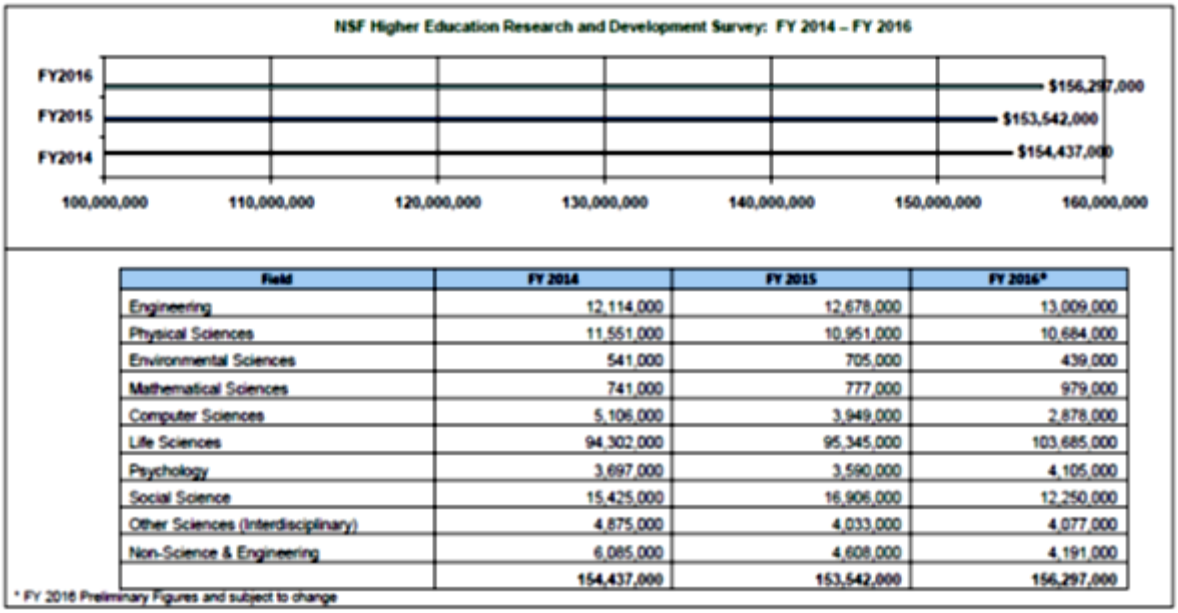
NSF Higher Education Research and Development Survey (HERD)

Each year, the National Science Foundation requests data from universities and colleges on their respective fiscal year research and development expenditures. The survey is developed and conducted by the NSF Division of Science Resources Statistics (SRS) and fulfils the legislative mandate of the National Science Foundation Act to "provide a central clearinghouse for the collection, interpretation, and analysis of data on scientific and engineering resources". The SRS develops and directs about 14 surveys and annually produces about 30 publications related to resources devoted to science, engineering, and technology. The surveys contribute to decisions affecting higher education, Congress, the executive branch, and education associations using institutional data.

The data represented below is generated from funding awarded to NDSU. Sources of funding include: Federal government, State and local government, industry, institution, and other sources such as non-profit foundations. Institutional funds include state appropriations, tuition and fees, and gifts expended for research and development activities. In addition, un-reimbursed indirect costs and cost sharing are included as part of the institutional data.

Table 2

NSF Higher Education Research and Development Survey FY 2014- 2016



Field	FY 2014	FY 2015	FY 2016*
Engineering	12,114,000	12,678,000	13,009,000
Physical Sciences	11,551,000	10,951,000	10,684,000
Environmental Sciences	541,000	705,000	439,000
Mathematical Sciences	741,000	777,000	979,000
Computer Sciences	5,106,000	3,949,000	2,878,000
Life Sciences	94,302,000	95,345,000	103,685,000
Psychology	3,697,000	3,590,000	4,105,000
Social Science	15,425,000	16,906,000	12,250,000
Other Sciences (Interdisciplinary)	4,875,000	4,033,000	4,077,000
Non-Science & Engineering	6,085,000	4,608,000	4,191,000
	154,437,000	**153,542,000**	**156,297,000**

* FY 2016 Preliminary Figures and subject to change

Source: NDSU

Table 3

Proposals processed through sponsored programs administration and total dollars requested from external funding sources, FY 2014 - FY 2016

	FY 2014		FY 2015		FY 2016	
College/Unit*	# Proposals	Requested	# Proposals	Requested	# Proposals	Requested
College of Agriculture, Food Systems and Natural Resources	26	$1,887,583	9	$117,396	21	$361,922
Agriculture Experiment Station and Extension Service	723	$67,791,645	661	$64,661,987	619	$45,345,585
College of Arts, Humanities and Social Sciences	39	$1,544,812	61	$2,544,075	60	$2,034,506
College of Business	1	$14,443	2	$5,000	3	$119,844
College of Engineering	124	$32,276,806	173	$43,308,647	166	$47,745,548
College of Human Development and Education	33	$1,895,568	43	$4,719,504	30	$2,178,982
College of Health Professions	80	$41,645,507	78	$24,792,569	76	$40,508,646
College of Science and Mathematics	177	$81,681,277	147	$53,954,944	156	$51,980,522
University Miscellaneous Offices	120	$37,324,544	119	$14,562,076	51	$12,555,680
Upper Great Plains Transportation Institute	52	$11,839,849	38	$6,986,351	59	$19,594,026
TOTAL	**1375**	**$277,902,034**	**1331**	**$215,652,549**	**1241**	**$222,425,261**

*College/unit categories are determined by the principal investigator's department only; co-investigators' departments are not reflected.

Source: NDSU

Table 4

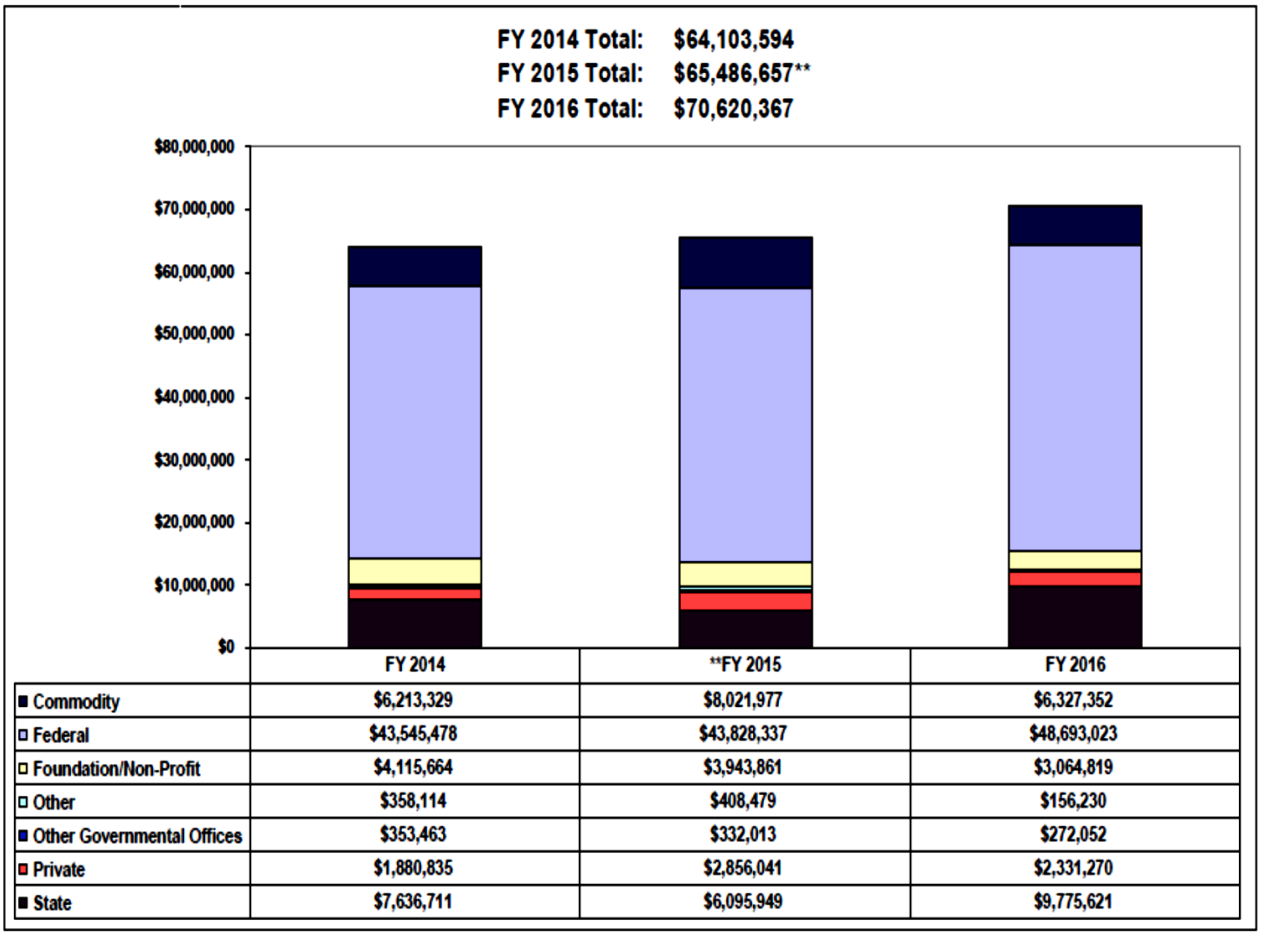
Total dollars awarded from external funding sources, FY 2014 - FY 2016

	FY 2014	FY 2015**	FY 2016
College/Unit*	Awarded	Awarded	Awarded
College of Agriculture, Food Systems & Natural Resources	$559,126	$65,645	$245,373
Agriculture Experiment Station & Extension Service	$19,918,393	$22,062,871	$25,964,700
College of Arts, Humanities & Social Sciences	$803,113	$1,437,801	$1,481,788
College of Business	$14,426	$3,000	$27,000
College of Engineering	$1,389,889	$3,604,157	$3,514,252
College of Human Development & Education	$999,069	$854,294	$1,684,601
College of Health Professions	$5,629,736	$4,247,266	$6,235,743
College of Science & Mathematics	$13,301,933	$11,208,792	$12,428,450
University Miscellaneous Offices	$9,974,724	$14,764,781	$12,405,847
Upper Great Plains Transportation Institute	$11,513,186	$7,238,050	$6,632,614
TOTAL	**$64,103,594**	**$65,486,657	**$70,620,367**

*College/unit categories are determined by the principal investigator's department only; co-investigators' departments are not reflected.
**Adjustments were made to the previously published FY 2015 External Awards total. The adjusted total is included here.

Source: NDSU

Figure 1 Summary of external awards by source*, FY 2014 - FY 2016



	FY 2014	**FY 2015	FY 2016
Commodity	$6,213,329	$8,021,977	$6,327,352
Federal	$43,545,478	$43,828,337	$48,693,023
Foundation/Non-Profit	$4,115,664	$3,943,861	$3,064,819
Other	$358,114	$408,479	$156,230
Other Governmental Offices	$353,463	$332,013	$272,052
Private	$1,880,835	$2,856,041	$2,331,270
State	$7,636,711	$6,095,949	$9,775,621

*Federal formula funds and state appropriated dollars are not included.
** Adjustments were made to the previously published FY 2015 External Awards total. The adjusted total is included here.

Source: NDSU

SUSTAINABLE ECONOMIC DEVELOPMENT

RECONSIDERING THE CONCEPT OF ECONOMIC TIME ACCORDING TO THE SUSTAINABLE DEVELOPMENT PARADIGM

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Abstract

Time, a fundamental element of everyday life, has preoccupied for thousands of years the world of physics, theology, psychology, and universal philosophy. It may overlap or not over economic time. On the other hand, the concept of sustainable development presents itself as a solution to the ecological, economic, social and political crisis of today requiring reconsideration of the quantity and quality of natural and industrial resources and the reconciliation between social and economic progress and nature. To this end, in order to improve the methodological and instrumental palette of the economy, this article proposes a constructive theoretical analysis of some fundamental concepts that underlie the description of the economic process calibrated for the sustainable development paradigm: time, sustainable development, time-space coordination, economic process. Therefore, this article proposes to reconsider the concept of economic time from the perspective of the sustainable development paradigm providing a theoretical basis for other theoretical or organizational-operational developments related to the economic process.

Keywords: time, sustainable development, economic process

JEL classification: A12, B40, Q01

Introduction

The paper proposes an analysis of some fundamental concepts underlying the description of the economic process: time, time-space coordination, sustainable development and economic time. In this analysis, we will also channel to emphasize the importance of reconsidering economic time from the perspective of sustainable development paradigm. Our approach is motivated by the literature shortcomings on the concept of economic process and especially on economic time in the context of the increasing complexity of global, regional and local social, economic and political realities, highlighting the need for theoretical and methodological developments.

Time is a fundamental element of exact sciences (especially physics and chemistry), but also in philosophy, theology and metaphysics. It is a measure of the duration of/between events and the context of time definition is almost always very important. In the sense of classical physics, time is a continuous phenomenon, but by its theories in quantum mechanics it is disputed this quality, insisting that only space-time relationship is continuous (e.g. Einstein has shown that the time elapsed for a resting body is longer than the flowing time for an observer on a moving body, as well as the fact that the longer we are at a greater distance from Earth, the faster time passes or the fact that at a higher altitude the time is leaking faster - the concept of gravitational temporal expansion). In philosophy, time is an uninterrupted flow that goes in one direction, from the past to the present, defining the framework for the nature processes. But time can be defined with difficulty in any science, being an abstract physical size, a purely human construct defining the duration of events or between events. In classical mechanics time is not correlated with the observer or the experimenter, it is also considered to be independent of space, of phenomena or of occurring events and that it is homogeneous (it always flows as fast). In relativity theory, however, time is no longer independent of the observer, but rather the space-time relationship and matter influences the form of space-time coordination. As Hawking (2001), remarked, "We must accept that time is not completely separate and independent of space, but combines with it, forming an object called space-time". Also in physics, there is a lively discussion about the expansion or contraction of time

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or about reversibility or irreversibility of the time flow, but also about the views on the sense of time: the thermodynamic sense (e.g. increasing entropy), the cosmological sense (expanding time or time-space) and the psychological sense (e.g. we can remember just the past). Time is also an issue of great economic and social importance and time units were made by agreement to quantify the duration of events and the intervals between them, regularity or the frequency of events serving as standard units for the time (e.g. the movement of the sun in the sky, major astronomical events of the year, moon phases, etc.).

In the work of Tănăsescu, Brătian and Oprean (2011), we acknowledge the fact that "the process represents the form through which a phenomenon appears, more exactly the evolution that is noticed for a phenomenon, the latter being the knowable version of a *noumenon*". Also, according to Dinga (2009) the economic process is an artifact, being a substitute for the economic act and measured by the economic phenomenon, representing an entity whose advent is determined by an ad-hoc deliberate decision-making.

Regarding the economic time, in Dinga and al (2011), the economic time does not overlap over physical time (the clock time), each economic process having its own time, with its own rhythm and cycle. Disclaiming of the Kantian vision of an absolute, conventional time and the coupling with the specificity of the process measured in the economy has led to the most frequent use of the concept of economic time. As Dinga and al (2011) observed, economic tact differences give the greatest distance between economic systems, economic disaster measurement being made when physical (mechanical) tact is less than economic tact. Also, Dinga and al (2011) state that economic time also involves a preferential direction for economic time given by the initial conditions (an arrow of time) and that the initial synchronization of physical tact with economic tact implies a convenient translation of the origin of the axes.

The concept of sustainable development, which emerged as a response to the global crisis of the early 1930s, is often seen as the new and even the only path of humanity, proposing a reconciliation between economic, social and ecological progress, proposing values centered on humankind and on its present and future needs, but also on nature, by preserving and regenerating the ecological patrimony of our planet. From this perspective, economic time can represent something else than economic time as it is classically defined.

From the perspective of sustainable development, the notion of time illustrates a problem to be resolved, a lesson to be learned or a necessary mentality changing as a way from a "shallow" anthropocentric behavior to a "deep" approach of human existence. In this framework, it is taking into account the connection between nature, society and economy based on the knowledge management principles of economic freedom, social responsibility and consolidation of education cultural values system that defines human being as a creation that has logical mind, social intelligence and Christian conscience (in the sense of fairness, fidelity, morality and respect for the/between people and from people to environment).

Description of the Problem

Economic science is often accused by the lack of its own theory of scientific knowledge, incorporating an impermissibly large amount of data, information, methods and paradigms from physics, chemistry, biology, sociology, theology, philosophy, informatics, medicine, etc. According to Hawking (2001), a theory "is only a model of the universe, or a limited part of it, and a set of rules linking the model scale to the observations we make. It exists only in our minds and has no other reality (whatever it may be). One theory is good if it meets two requirements: it must accurately describe a wide class of observations based on a model that contains only a few arbitrary elements, and must make predictions on the results of future observations." Also he observes that any theory is always based only on hypothesis, being temporary, and can be easily rejected or not proved, especially if at the base of theory are experiments, which can contradict the theory at some point in time. According to Popper (2001), a good theory is characterized by the fact that it allows by observation the possibility of falsification or the existence of some contradictions of the predictions of the theory. Still, regarding the economic field and its scientific theories, this influx of tangential knowledge can be partly explained by the need to find a way of its own, according to the present and future needs of economic science.

The economic time is quite less treated by the economic literature. Thus, according to Tănăsescu, Brătian and Oprean (2011),"In economy the concept of time for the economic process is only a unit for measuring it from the outside and the studied economic phenomena are only in the form of some dynamic trajectories with attributes such as: determinism, regularity, reversibility". As noted by these authors, understanding the economic process and especially of economic time is more than relevant in the world of finance, in which financial asset assessment models conducted over continuous time have provided a range of opportunities for speculation and financial innovation that led to speculative balloons and eventually to the Wall Street financial collapse and to the world-wide recession. Also, they noted the fact that a possible cause of this situation (countless financial crises!) is precisely the lack of tools to provide predictability in economic science. More specifically, the fact that economic time is not treated systematically (including through philosophy) and that it is certainly not used the right clock to measure the economic processes.

Measuring the economic time of an economic process of an entity allows a more accurate localization of shortcomings in optimizing the time of an economic process, but the assessment of the economic time allows also a qualitative description of economic time and a better understanding of the production, distribution, and sales processes. Thus, we can say that the extremely vague literature on economic time has no record of the connection of economic time with sustainable development paradigm.

Methodology and Data Sources

The article is intended to be a critical, logical and theoretical analysis that aims to identify the less well observed aspects of economic time, focusing our attention on the distinctive features of sustainable development economic time. In the paradigm of sustainable development, economic time express the need to incorporate time elements that will allow the transition from an economy based on financial optimality to an economy based on sustainability and resource maintenance while simultaneously satisfying the trinomial of social, environmental and economic efficiency. The paper aims at identifying typologies and specific features of economic time within the sustainable development paradigm, so that by understanding our approach, in the perspective of implementation, the economic time will gradually incorporate the perspective of reformulated time according to sustainable development paradigm.

Results Obtained

Some Economic Time Approaches

In the economic framework, time means also knowledge of existence starting from its Cartesian essence "cogito ergo sum" ("I think, therefore I am", Descartes, 1911) and which has at least two possible approaches or perspectives:

1. The perspective of time of action, the actual time for conducting of an economic process

2. The perspective of time of meditation, the time of reanalyzing and rethink the production framework, including the management performance

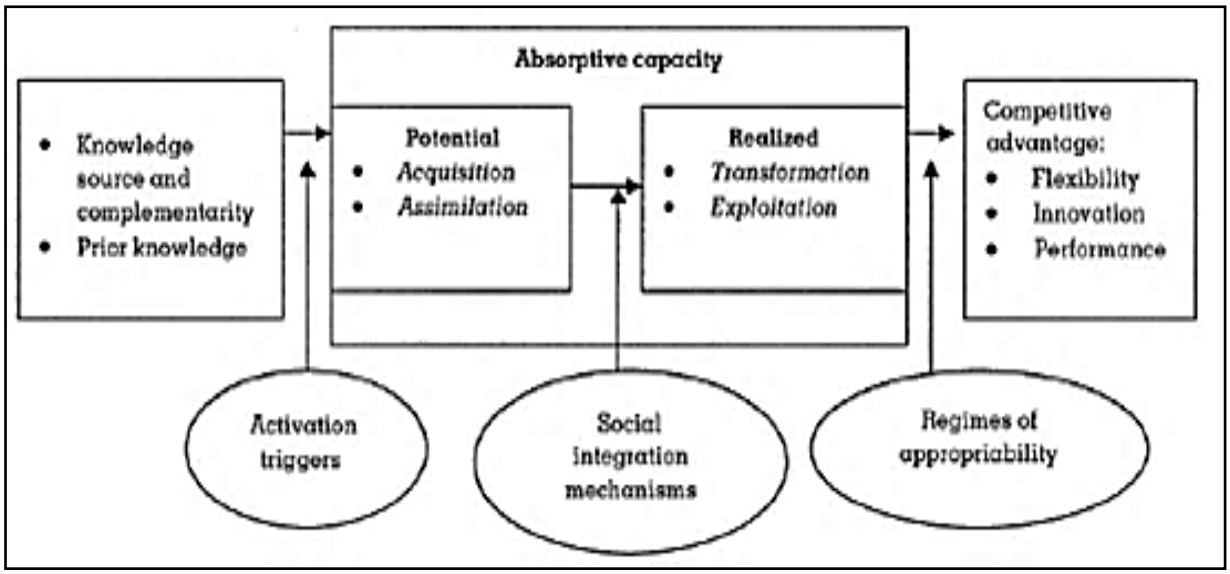
The first perspective of economic time illustrate the relation between dates, information and knowledge in the framework of comparative and competitive management of so called STI (Science –Technologic – Innovation) and DUI (Doing, Learning, Interacting) methods integrated in the so called Kaizen (a Japanese concept of sustainable way of continuous improvement of all aspects of working and living meaning both thinking and experimenting) and SECI (Socialization, Externalization, Combination, Internalization) knowledge action models (Nonaka and Takeuchi, 1995; Jensen, Johnson and others, 2004; Cheng, 2015). Understanding these forms of knowledge allows us to have a discussion about the two modes of innovation, STI and DUI and their implications on economic time.

STI innovation is based on scientific knowledge, the 'know-why,' and the formalized 'know-what.' STI knowledge is explicit knowledge, meaning it is able to be written down and understood by others who read it. Organizations tend to like STI innovation because it is seen as easier to measure and to understand – there is a formal process. The consequence of STI is the

development of knowledge, design, collection, analysis, control and development the production, financial and market image taking into account the continuous optimization of economic production factors as well as the continuous improvement of activities in the context of a relative prices structural matrix. Regarding the economic time of STI knowledge, we can note that it can be conspicuously long and it embraces all stages of formal knowledge, fragmenting economic processes into more limited sequences that can lead to understanding of the shortcomings and in final to the shortening of the economic time segments for all or at least for some of the stages from design to selling.

DUI innovation is based on experiential knowledge, the 'know-how' and 'know-who,' often called learn-by-doing. DUI knowledge is implicit/tacit knowledge, meaning it is understood without being stated and in fact might not truly make sense if stated – like riding a bike. The benefit of DUI innovation is a wealth of information based on interaction inside and outside the organization, focused on what we can do with this information, the practical application, instead of why we are finding this information. DUI brings with it a powerful feedback loop that helps organizations build the right thing, often quicker and makes the organizations to be open to solutions that it may not currently be seen – this links to organizational learning in order to develop the so called absorptive capacity (AC) – more exactly the firm's ability to identify, assimilate the acquired information from outside the firm, to transform and to exploit properly the new knowledge from the environment (Zahra and George, 2002)(see figure 1). The economic time in DUI knowledge is a lot less than in STI knowledge, but presents the impediment that is an extremely variable and fluctuating element, sometimes with large amplitudes, being practically a complementary time to that determined by classical knowledge in the economic process.

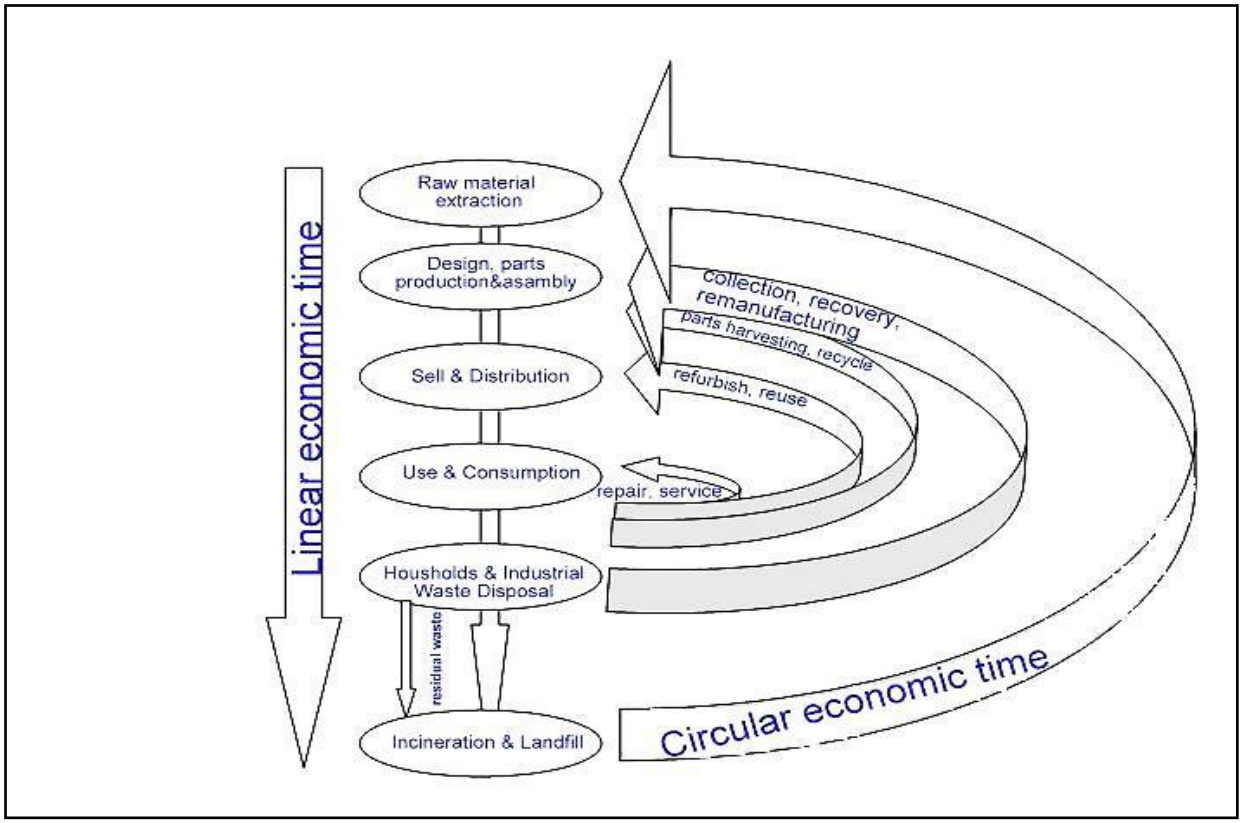
Figure 1 – Absorptive Capacity Model



Source: (Zahra and George, 2002), AC: A Review and Reconceptualization, and Extension. Academy of Management Review, 27(2), 185-203.

If we take into account the sustainable development paradigm, the economic time involved both in the STI knowledge process and in the DUI knowledge process acquires some other significance, becoming apparently longer (see figure 2). Also, it presupposes a deep restructuring of the components and the functioning of the economic process, which may in time diminish the volume of inputs in the system. Thus, these methods of STI and DUI can be integrated in so called sustainable development generational management models that illustrate both linear and non linear features. Both linear and nonlinear models could help the deepening of understanding of "weak" and "strong" features of sustainable development and implicitly of economic time in sustainable development / circular economy paradigm.

Figure 2 – The diagram of linear, circular economy and economic time in these paradigms



Source: processing and reconfiguration by WRAP and Ellen MacArthur Foundation reports and diagrams

The second approach of economic time can be a philosophic, or a meditation time about the relationship between economic freedom and social responsibility, taking into account a necessary changing of the human mind and conscience – metanoia – through education, culture, patriotism and spiritual life. These aspects are a step forward from a “shallow” to a “deeper” mature approach of sustainable development (Naess, A.1995). In this sense, the idea of “meditation” time is also a form of reformulation of fundamental issues related to success, use and results. In this approach, it matters more the path followed – one intended to ensure prosperity for future generations – and less the net benefit or the profit of a business. In this sense, for the entrepreneurs it matters more the interrelationships in the business environment and the ensuring of the social and environmental welfare of the business. Therefore, the time of "meditation" is the time of restructuring the way of life and functioning (of a person, but also of a business), of finding alternative solutions for simplification and "relaxation" of everyday life by embedding in the productive circuit as resources the former products who reached the stage of waste. This type of transition requires a change of paradigm from the competitive economy to the conjugate, collaborative economy, unique to each of its segments but functioning as a whole.

Another approach to economic time can be seen from the perspective of barriers to opening a business or its (production and distribution technology line or products) upgrading. Thus, a considerable impact on a business can have the theoretical, legislative, institutional, political and operational frameworks, by prolonging the economic time. This reality becomes even more obvious when implementing a circular business in line with the sustainable development paradigm. In this situation the economic time will encompass the inertia and the system change reluctance (e.g. the dependence on the old path).

Some Features of Economic Time and of Economic Time in Sustainable Development Paradigm

The economic time of an economic process is also linked to the economic times of another economic process, the easy connection of these times, their harmony or disharmony, creating a

harmony or general disharmony between firms, between firms and state, in some branches of a national economy or even in the overall economy. Practically, economic time proposes the optimization of physical time, having the property of increasing the degree of economic involvement (implicitly of the time) of other economic agents. So, an economic time shows *flexibility, heterogeneity, optimization, gravity* and *networking properties*. Thus, the economic time and space presents a number of attributes specific to the network theories. According to Barabási (2002), the networks are at the heart of Complex Systems (cellular, neural, social, communication-internet, trade networks and any other interconnectivity systems) and implies the existing of nodes which are grouped in small clusters and each node is connected with other nodes (forming routers or hubs) and less with the outside world, the interconnectivity being the strong point (bringing competition and strength) but also the weak point (e.g. one sick node infecting others) of networks. Thus, we can see that the economic time has some properties of free-scale networks analyzed by Barabási (2002) but the concept of networks apply even better to circular economy and sustainable development. These concepts involve an active and perpetual integration of phases of the economic process extending the production cycle beyond the product waste phase. Therefore, the economic time in the paradigm of sustainable development and circular economy is longer than in classical economic time. It involves a better distribution / reassembly of the intermediate phase times. It includes a permanent time of reanalysis, an innovation that is absolutely necessary in finding the solutions that make better use of waste and assuming even from the very beginning the design for a modular system that allows, by recovery, only the replacement of what is spoiled from a product or process.

Like economic space, economic time can also present discontinuities, overlapping over the concrete time, but also presenting certain syncope necessary for the normal functioning of the economic process, such as the absence of music during the singing of a song. The lack of continuity in the economic process and implicitly in economic times should not be perceived as a tragedy especially in the case of seasonal business or in creative/conception business, (e.g. research, innovation, IT, etc.), but there should constantly be a concern to shorten dead or inefficient times and better linking of economic times. According to this perception, economic time is a time of change requiring an extension in time as much as necessary in order to achieve the desired result (effectiveness) and less mechanical, recorded efficiency (e.g. number of hours per product etc.). In sustainable development paradigm the economic time is more expanded than the usual economic time, having an extremely high frequency of discontinuities necessary for the more careful binding of the productive process (e.g. the internal productive process being inseparable from the external one - the connection with other companies downstream or upstream to the business).

As economic space, the economic time shows greater flexibility than physical time, its denseness varying depending on the economic process to which it is destined. He presents the flexibility and heterogeneity of the economic process to which he is assigned. These attributes are even more pronounced in economic time from the perspective of sustainable development and circular economy. The increased desirability and the extended flexibility of economic time are due precisely to the particularity of business functioning according to principles other than those of the classical economy.

Like the economic process and the economic space, economic time shows nonlinearity, relativity, but also the human subject endogenity in the economic process. Thus, we are in Tănăsescu, Brătian and Oprean (2011) assertion that argues the existence of an economic time that is not perceived phenomenological and is not linearly correlated with the known economic processes, as well as the fact that efficient determinism and causality are not instrumental elements suitable for understanding the economic processes/activity but only the final causality, the teleological one (the purpose of the economic subject). In this sense, we postulate that the economic process in sustainable development is very different from the economic process in the classical sense, not by changing the purpose-type causality, but by correcting the human behavior by law, education and mentality so that from the positive consequences of an economic activity to benefit not only the author(s). Thus, in the paradigm of sustainable development, economic time is in turn redefined not as a time of speculation, of obtaining profits at any cost (as now!), but as a time of correct and concrete connection to the needs of others, not only under the constraint of the moral principles and laws but especially under the constraint of a new, better, more efficient way of doing business.

Conservation of natural and industrial resources may no longer represent an option in the near future. It could quickly become a real constraint imposed by realities and laws, and then the mechanism of business development at local, regional, international level will fundamentally change. Waste that has been expelled from the civilized world into third world economies or underdeveloped economies will be in the near future "redeemed" and "imported" to allow economic, social and political survival. In this paradigm, economic time is not a time of efficiency in a mechanical sense, but a time of searching and finding alternative options.

Conclusions

The paper proposes an analysis of some fundamental concepts underlying the description of the economic process: time, time-space coordination, sustainable development and economic time. In this analysis, we will also channel to emphasize the importance of reconsidering economic time from the perspective of sustainable development paradigm. Our approach is motivated by the literature shortcomings and the need for theoretical and methodological developments, especially that there is no record of the connection of economic time with sustainable development paradigm.

In this sense, we analyzed economic time at least from two possible perspectives: the perspective of time of action, the actual time for conducting of an economic process and the perspective of time of meditation, the time of reanalyzing and rethink the production framework.

The first perspective of economic time illustrate the relation between dates, information and knowledge in the framework of comparative and competitive management of so called STI (Science –Technologic – Innovation) and DUI (Doing, Learning, Interacting) methods. STI knowledge is explicit knowledge, meaning it is able to be written down and understood by others who read it. Organizations tend to like STI because it is seen as easier to measure and to understand – there is a formal process. The consequence of STI is the development of knowledge, design, collection, analysis, control and development the production, financial and market image taking into account the continuous optimization of economic production factors as well as the continuous improvement of activities in the context of a relative prices structural matrix. DUI is based on experiential knowledge, the 'know-how' and 'know-who,' often called learn-by-doing, being an implicit/tacit knowledge. DUI brings with it a powerful feedback loop that helps organizations build the right thing, often quicker and makes the organizations to be open to solutions that it may not currently be seen. The economic time in DUI knowledge is a lot less than in STI knowledge, but presents the impediment that is an extremely variable and fluctuating element, sometimes with large amplitudes, being practically a complementary time to that determined by classical knowledge in the economic process. If we take into account the sustainable development paradigm, the economic time involved both in the STI knowledge process and in the DUI knowledge process acquires some other significance, becoming apparently longer.

The second approach of economic time can be a philosophic or a meditation time about the relationship between economic freedom and social responsibility, taking into account a necessary changing of the human mind and conscience – *metanoia* – through education, culture, patriotism and spiritual life. In sustainable development paradigm this type of economic time is more pronounced containing the time of transition from the competitive economy to the collaborative economy.

When considering the features of economic time of an economic process we argue that economic time proposes the optimization of physical time, having the property of increasing the degree of economic involvement (implicitly of the time) of other economic agents. So, an economic time shows *flexibility, nonlinearity, heterogeneity, optimization, gravity* and *networking properties*. In sustainable development paradigm the economic time is more expanded than the usual economic time, having an extremely high frequency of discontinuities necessary for the more careful binding of the productive process. According to us, in the paradigm of sustainable development, economic time is in turn redefined not as a time of speculation, of obtaining profits at any cost (as now!), but as a time of correct and concrete connection to the needs of others, not only under the constraint of the moral principles and laws but especially under the constraint of a new, better, more efficient way of doing business.

Future Directions to Be Approached

This analysis can be extended to other features of economic process (e.g. causality, space etc.) according to sustainable development or circular economy paradigms. When considering economic time from the sustainable development perspective, the theoretical analysis can be looked from other corners and views or even studied as a concrete, practical case study.

Bibliography

Barabási, A.-L. (2002), Network Science, Perseus Publishing, Cambridge, Massachusetts.

Cheng, Eric C.K (2015), Knowledge Management for School Education, Springer Singapore Heidelberg New York Dordrecht London.

Descartes, René (1911), The Philosophical Works of Descartes, rendered into English. Translated by Elizabeth S. Haldane and G.R.T. Ross. Cambridge University Press.

Dinga, E. (2009), Studii de economie. Contribuţii de analiză logică, epistemologică şi metodologică, Editura Economică, Bucureşti.

Dinga and al (2011), Sustenabilitatea economică prin politici de ajustare în contextul globalizării, Editura Academiei Române.

EMF (2015) “Growth Within: A Circular Economy Vision for a Competitive Europe”, EMF, SUN, McKinsey Center for Business and Environment.

Hawking, S.W. (2001), SCURTĂ ISTORIE A TIMPULUI De la Big Bang la găurile negre, Ediţia a III-a, Traducere din engleză Michaela Ciodaru, Editura Humanitas, Bucureşti.

Jensen, M. B., Johnson, B. and others (2004), Absorptive Capacity, Forms of Knowledge and Economic Development, Document de travail n° 2004 – 2, GROUPE DE RECHERCHE EN ECONOMIE, DROIT ET GESTION, CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE UNIVERSITE DE NICE - SOPHIA ANTIPOLIS ,Décembre.

Naess, A. (1995). Deepness of Questions and the Deep Ecology Movement, in Deep Ecology for the 21st Century: Readings on the Philosophy and Practice of the New Environmentalism, ed. George Sessions Boston: Shambala, 1995.

Nonaka, I., Takeuchi, H. (1995), The Knowledge-Creating Company. New York: Oxford, University Press.

Popper, K. (2001), Conjecturi şi infirmări, Editura Trei, Bucureşti.

Tănăsescu, C, Brătian, V., Oprean, C. (2011), Time and Causality in the Economic Process – a Critical Approach Based on Consistency Criteria, Theoretical and Applied Economics, No. 1 / 2011 (554).

Zahra, S. A., George, G. (2002), AC: A Review and Reconceptualization, and Extension. Academy of Management Review, 27(2), 185-203.

* * *, http://www.wrap.org.uk/about-us/about/wrap-and-circular-economy.

IS PUBLIC DEBT A WAY TOWARDS CIRCULAR ECONOMY?

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Abstract

Today, there are many public cautions, national and international legislations regarding the crossing a specific threshold in the ratio between government debt and gross domestic product. This aspect is still stirring up debates in the literature, between many economists, but very few people argue that the purpose of indebtedness should be the target of these concerns. In this debate, the circular economy is not usually found. Therefore, this article, besides the fact that establishes that the subject of indebtedness should be the main area of interest for any serious debate, it points out the need to build public debt on the grounds of the principles of sustainable development, integrating the vision of the circular economy. Thus, the article aims to achieve an important theoretical openness regarding the role of public authorities in creating the legal framework, coordinating and facilitating the implementation of the circular economy in national and/or regional economies.

Keywords: public debt, circular economy, the role of public administration, sustainable development

JEL classification: H63, I31, Q01

Introduction

First of all, in order to analyze successfully the chosen topic, we need to define the concepts we will operate with like: public debt, sustainable development and circular economy.

In the most simplistic way possible, the public debt represents how much a country owes to the lenders other than itself, including individuals, businesses and other countries' governments. The public debt definition can be different from country to country, but it usually refers to the national debt and less to the debt owed by municipalities, provinces and states, including intergovernmental debt (e.g. better described by the lending from the social security trust funds by the state treasury). Depending on the place of origin of the lending entities, public debt can be divided into two typologies: external public debt and internal public debt and according to IMF definitions (IMF, 2013), public debt is the total financial burden borne by all government bodies of a country. The accumulation of annual budget deficits (the governmental tax revenues which exceed the public spending) is the description of public debt. The public debt instruments are usually saving bonds, notes, treasury bills and government bonds, being a safe way (backed by the government) for national and international investors to support the economic growth of a country. Although not to be confused with external debt, there is a link between public debt and external debt, public debt affecting external debt by the increase of interest rates on public debt which usually determines a rise of the interest rates on almost all private debt, regardless of whether the creditor is a national or foreign entity. That is why private sector insists on reducing public debt, including of the ratio of public debt-to-GDP. This indicator reflects the capacity of a country of paying off its public debt and when it reaches a certain critical level, feeling a higher risk, the investors become worried and they demand higher interest rates. Thus, the state must always keep in mind a natural balance between the actual level of public debt and the one desired so that to be large enough to support and impulse economic growth but at the same time to be low enough to keep at modest levels the interest rates. Thus, being involved in the process of setting up a public debt management strategy, the government must focus carefully on cost and funding targets, as well as thinking and developing the best ways of financing the public debt.

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But are the level of public debt, the way it is constituted and how it is financed the only aspects that should be taken into account in the public debt analysis? Would not it be necessary to think about the fiscal-budgetary issues, the public deficit, the public debt, the sustainability of the public debt etc. in a wider spectrum, with a longer horizon? In this sense, we consider that this article attempts to place a public debt in the sustainable development paradigm and especially in the circular economy paradigm.

Description of the Problem and Short Literature Review

Frequently, public debt is not analysed in relation with what it should be the real purpose of the public indebtedness: increasing the living standard of the population of a country, respecting the principles of sustainable development, the implementation of circular economy, ensuring at least at the present level the economic, social, educational, political and environmental conditions for the next generations.

But what are the sustainable development and the circular economy? Are these concepts and realities so difficult to manage from budgetary-fiscal perspective? Can the public debt be accommodated with the needs of the circular economy? All of these questions will be answered in this article.

More and more discussed in debates, conferences, articles and studies, sustainable development concept was described in 1987 “Our Common Future” Report of the World Commission on Environmental and Development. The sustainable development is according to the above report the development that “meets the need of the present without compromising the ability of future generations to meet their own needs”. Thus, the human pressure on natural world must be tempered in order to provide capabilities and protecting the welfare for the next generations, giving to the intergenerational fairness concept a wide area of debate.

Although it has ancient roots in the history of humanity (e.g. Aristotle said that the true wealth lays not in ownership but rather in the utilisation), the circular economy concept emerged form the late 1970s and has gained consistency in 1990s. According to Ellen MacArthur Foundation report (2016, pp.20) “A circular economy is a continuous cycle that preserves and enhances natural capital, optimises resource yields, and minimises system risks by managing finite stocks and renewable flows […]. A circular economy does not just amount to adjustments aimed at reducing the negative impacts of the linear economy; it reflects a systemic shift that creates a positive and self-reinforcing development cycle, generating business and economic opportunities and environmental and social benefits”.

The concept of circular economy was developed by numerous thinkers, academics and economists. One of them is Walter R. Stahel, an architect and economist, which gave meaning to concepts of "Cradle to Cradle", industrial sustainability, “smallest loop” or “closed loop”, “performance economy” or “functional service economy”, militating for: selling services rather than products, the extension of the life of the products, waste prevention, long-life goods and reconditioning activities (Stahel and Reday-Mulvey, 1977; Stahel, 1994). In the 2002 book ”Remaking the Way We Make Things”, the chemist Michael Braungart and the architect William McDonough developed the concepts of Stahel by presenting the necessity of using in a safe manner materials, energy and water, doing more with less, creating green architecture and reducing and eliminating wastes. Over the years, the circular economy evolved in containing and developing concepts as biomimicry, industrial ecology (Gaedel and Allenby,1994; Socolow, Andrews, Berkhout, Thomas, Moomaw 1997) and blue economy (Gunter, 2010, World Bank, 2017), all of them highlighting the importance of using natural and industrial resources in a sustainable manner.

Thus, the national states, parliaments and governments must take into account the imperative relationship between economic productivity and natural world ecosystems transposing into legislation the economic actors responsibility for minimizing not only the usage of the resources but especially the generation of the waste. But the legislation is only one area to be developed by the national states, others concern accounting policies, monetary policies, fiscal-budgetary policies and educational and research policies. All areas, all tiers and all economic concepts must be reformulated to be reintegrated into the sustainable development paradigm. The gradual loss of morality in society and economy shows its ugly fruits not only on human society, but also on the

environment and the way in which environmental issues must be resolved by people. Thus, through education policies at all levels, the state must intervene to correct moral behavioral errors, both vis-à-vis society and the environment. Environmental issues are not problems that could be neglected or delayed and climate change and natural disasters of recent decades have made it clear that there are no regions on the earth that cannot be the subject of such dramatic events. In this context, social and environmental solidarity and respect gets other connotations, meaning not all of us together for the needs of each of us but rather all together for the needs of all. In this sense, sustainable development and circular economy must be more than simple notions used by politicians and specialists but rather an effective solution for the present and next generations. Thus, these concepts are not so hard to accommodate to the budgetary-fiscal policies especially that, after an initial large investment, the savings for public budget can be pretty impressive. In this sense, according to the report "Achieving Growth Within" the EU should invest in the circular economy projects (especially in mobility, food systems and the built environment) no less than €320 billion through to 2025. This is almost equivalent with national debt (the indicator government consolidated gross debt by components) of Greece in 2016 (314.897 billion euros, data from Eurostat, updated at 15.09.2017) but almost nothing, just 0.74%, of all EU government consolidated gross debt.

Methodology and Data Sources

Being pretty hard to trace the connection between public debt and circular economy, taking into account that even circular economy indicators are not so well established being numerous discussions between international specialists on methods, indicators, data sources and data availability and comparability, we propose a rather theoretical display of the connection between public debt and circular economy. Still, we tried to cope with this situation, applying an initial correlation analysis for General government gross debt (EDP concept), consolidated – annual data (GGGDCAD) expressed as Percentage of gross domestic product (GDP) and Recycling rate of municipal waste expressed in percentage (RRMW) (the tonnage recycled from municipal waste divided by the total municipal waste) for all UE 28 countries in order to see possible correlations between them for the period from 2000 until 2015. Also, the first set of data has initially proposed to include in these correlations the Eurostat indicators of transforming the economy: Generation of waste excluding major mineral wastes (kg per capita), Landfill rate of waste excluding major mineral wastes (%), Recycling rate of e-waste (%) but the lack of data made us to make only the connection between GGGDCAD and RRMW.

Thus, being only a glimpse of reality, the paper uses the case study approach at the EU28 level as a whole and at the level of a few important countries selected (Germany, Greece, Spain and Romania). The selection of countries was made according to the data availability and especially in order to capture four different types of countries from North, South, West and East of EU. Also, the article is suggesting that the Nordic countries model of a very conscientious society of natural resources scarcity must be extended of all EU countries. Thus, the catching up process would involve that the least EU developed countries to invest smartly and heavily in circular economy implementations. The paper is not so much a case study, though includes this type of analysis, but rather a clear way of militating for the introduction of the circular economy into the concerns of researchers, specialists, politicians and managers. This means the rethinking of the concerns of public or private decision-makers and implicitly the recalibration of budgets and public or private debts in order to implement such an economy.

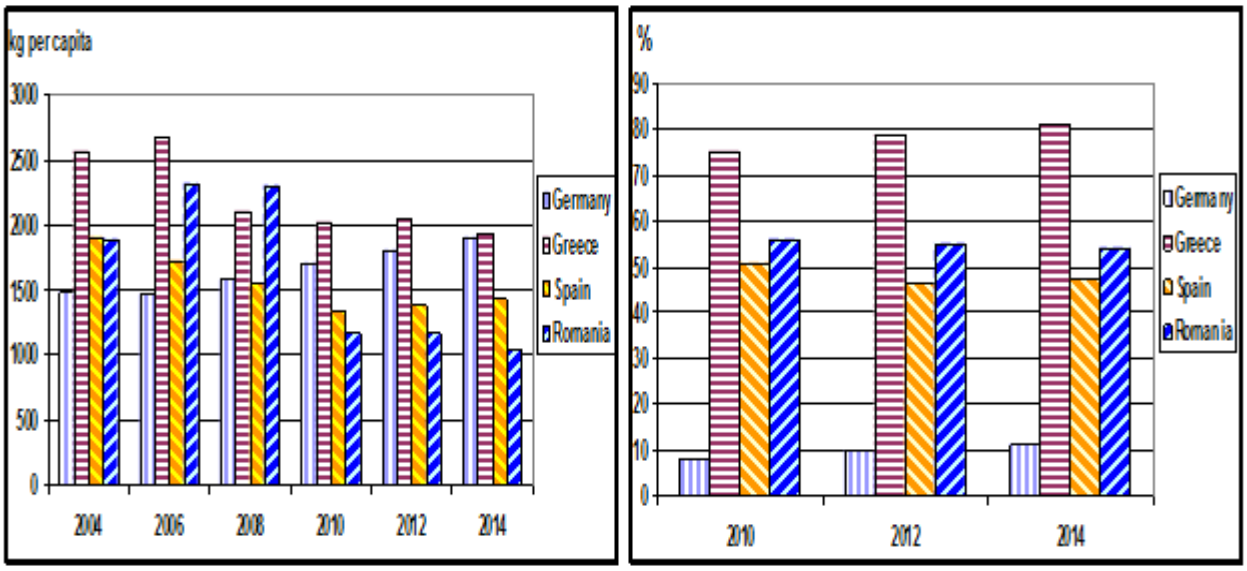
Results Obtained

As mentioned before, in order to set proper public and private policies decisions, the indicators called to accomplish the circular economy vision must be collected respecting not only national standards but also international ones, must be must be simple, concrete, comparable and the most important to be agreed by a wide range of users such as policy makers, statistical institutes, non-governmental organizations, researchers etc. European Academies' Science Advisory Council (EASAC) concluded this sort of courageous analysis. Thus, EASAC policy report (2016) analysis the indicators (from United Nations Development Program (UNDP), Ellen MacArthur Foundation, United Nations Environment Program (UNEP), Yale and Columbia Universities, European

Innovation Partnership, World Bank, European Union Resource Efficiency Scoreboard, Global Reporting Initiative and Eurostat) that may be appropriate for monitoring progress towards a circular economy. In this sense, the indicators were grouped into societal behavior, material flow analysis, organizational behavior, sustainable development, environment and economic performance. Thus taking into account the information offered by the EASAC report (2016) and the Eurostat going through Resource efficiency scoreboard we stopped at "Transforming the economy" thematic indicators. We looked at all four indicators: Generation of waste, Landfill rate of waste, Recycling rate of municipal waste and Recycling rate of e-waste. The lack of a satisfactory set of data has made us showing only the evolution of the four mentioned above, for the fourth one, in turn, we realized also the correlation with the evolution of the public debt.

The Generation of waste, which presents the amount of waste generated, excluding major mineral wastes, being calculated by converting tonnages into kilograms and then dividing by the number of inhabitants in the country, shows that the most generator of waste from the selected countries of EU28 is Greece for entire analyzed period. In 2006 and 2008, Romania had also values close and even above Greece values for generation of waste. Taking into account the indicator Landfill rate of waste excluding major mineral wastes, which is the quantity of waste landfilled which is divided by the waste treated in the same year and displayed in percent, it can be noticed that except Germany, countries like Greece, Spain and Romania has a pretty pour understanding of the environmental impact of land filing in terms of localized pollution and emissions of greenhouse gases to the atmosphere.

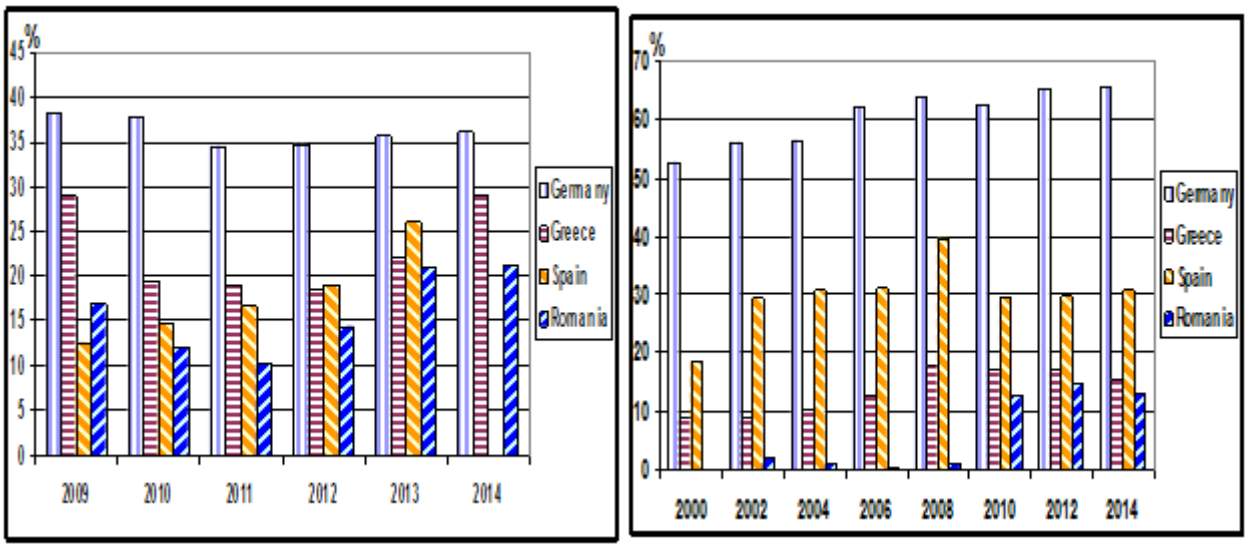
Figure 1 – Generation of waste excluding major mineral wastes and Landfill rate of waste excluding major mineral wastes for Germany, Greece, Spain and Romania



Source: Eurostat

Recycling rate of e-waste is the indicator which tracks the recycling of electrical and electronic equipment waste (e-waste) and in 2016 the minimum collection rate was 45%. The Germany is very close to the target set but the rest of selected countries are far behind. Recycling rate of municipal waste, which includes material recycling, composting and anaerobic digestion and represents the tonnage recycled from municipal waste divided by the total municipal waste generated in the same year, displayed in percent, reflects, from the selected countries, the performance of recycling municipal waste of Germany and secondary of Spain.

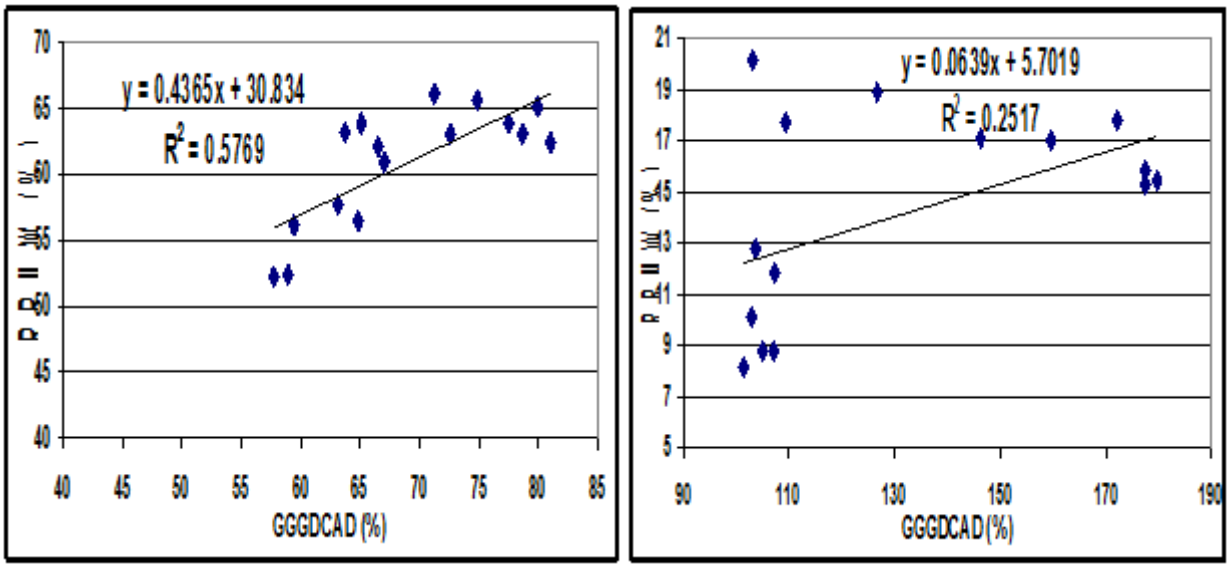
Figure 2 – Recycling rate of e-waste and Recycling rate of municipal waste for Germany, Greece, Spain and Romania



Source: Eurostat

Taking into account the lack of data availability in order to see if the public debt – GGGDCAD (General Government Gross Debt (EDP concept), Consolidated - Annual Data) is correlated with Recycling Rate of Municipal Waste (RRMW), for EU28 for a period from 2000 until 2015 it can be noticed that the correlation coefficient is quite small 0.237. For the same period for Germany the correlation coefficient between GGGDCAD and RRMW is 0.759 and for Greece is 0.501. The positive and quite strong correlation indicates that there is a good connection between public debt and recycling rate of municipal waste signifying that debt is and can be a practical way of financing circular economy or at least a small part of it. Considering a scatter analysis, the relation between GGGDCAD and RRMW is quite well illustrated by the regression function, which demonstrated that the R square using a linear function for the whole period for Germany is fitted.

Figure 3 – The scatter analysis and the coefficient of determination reflecting the correlations between General government gross debt (EDP concept), consolidated - annual data and recycling rate of municipal waste for Germany and Greece

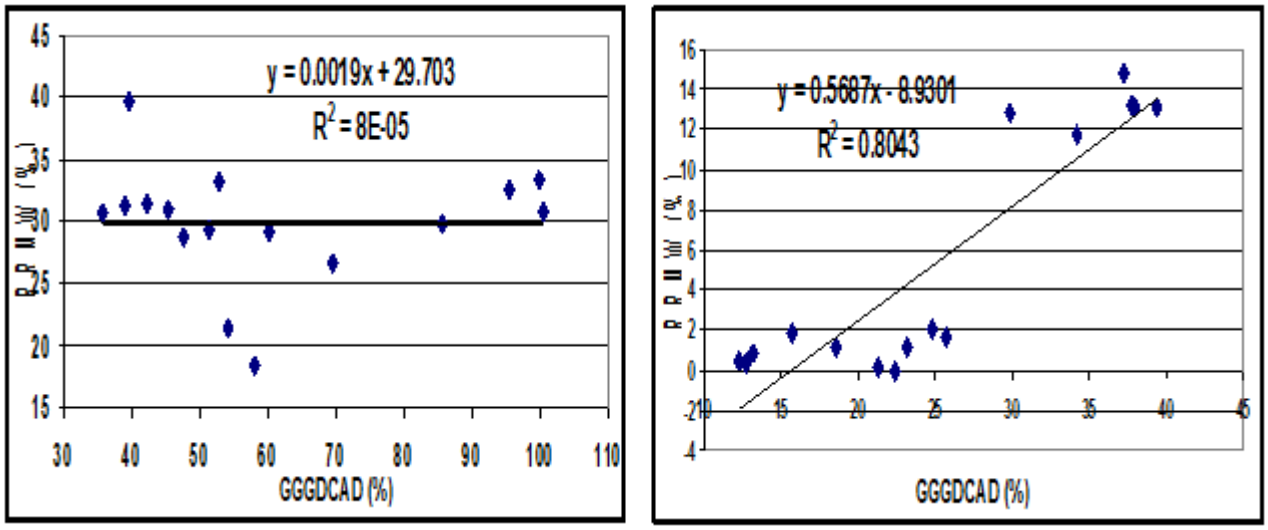


Source: Eurostat

The correlation coefficient between GGGDCAD and RRMW for the same period for Spain is 0.008 and for Romania is 0.896. The very strong correlation for Romania must be looked with caution because it reflects an increase from almost a non-existent level of RRMW (and implicitly a small

correlation with GGGDACAD) up to a slightly better level of the indicator RRMW. The scatter analysis reflects the same information for the two countries and the R square for Romania using a linear function for the whole period is quite fitted.

Figure 4 – The scatter analysis and the coefficient of determination reflecting the correlations between General government gross debt (EDP concept), consolidated - annual data and recycling rate of municipal waste for Spain and Romania



Source: Eurostat

Of course, this type of analysis may be expanded to the extent that the availability of data on cyclical economy and sustainable development indicators will increase. That is why it is necessary that many international and national organizations and institutions should develop not only structures of indicators of the circular economy and sustainable development but also connections with other national, regional and international macroeconomic policies.

Conclusions

This article proposes an interesting topic regarding the debt for sustainable development and circular economy. First, we defined the concepts with which we will operate like: public debt, sustainable development and circular economy. Then, we tried to accommodate debt budgetary-fiscal indicators to the circular economy and sustainable development perspective.

Beyond the theoretical approach we have applyed an initial correlation analysis for General government gross debt (EDP concept), consolidated – annual data (GGGDCAD) expressed as Percentage of gross domestic product (GDP) and Recycling rate of municipal waste expressed in percentage (RRMW) (the tonnage recycled from municipal waste divided by the total municipal waste) for all UE 28 countries in order to see possible correlations between them for the period from 2000 until 2015. Also, the first set of data has initially proposed to include in these correlations the Eurostat indicators of transforming the economy: Generation of waste excluding major mineral wastes (kg per capita), Landfill rate of waste excluding major mineral wastes (%), Recycling rate of e-waste (%) but the lack of data made us to make only the connection between GGGDCAD and RRMW. Analysing for EU28 as a whole and for Germany, Greece, Spain and Romania it can be concluded that there are seams of connections between public indebtedness and the implementation of circular economy indicators (in our case the Recycling rate of municipal waste). Looking at the figures, considering the countries under consideration and the selected indicators, only Germany seems motivated to reach the targets of sustainable development and the cyclical economy, and it seems that it is motivated to invest from public funds (including debt) for this important goal.

In conclusion, the close future will show that the way we must look to resources should be circular, based on collaboration between public and/or private actors and very concrete, based on promoting technologies for recovery and reuse of natural and industrial resources.

Future Directions to Be Approached

This type of analysis may be expanded to the extent that the availability of data on cyclical economy and sustainable development indicators will increase and the public authorities, the non-governmental organizations and the private companies will understand that there is a correlation between the circular economy and the investment in this field.

Bibliography

Allenby, B.R. (1992), Achieving sustainable development through industrial ecology. International Environmental Affairs.

Ayres, R. U. (1989), Industrial metabolism, in the book “Technology and Environment”, Ausubel, J.H. and Sladovich, H.E., eds. Washington, D.C.: National Academy Press, pp.23-49.

Gaedel, T. E., Allenby, B. R. (1994), Industrial Ecology, Prentice Hall, Englewood Cliffs, NJ.

Georgescu-Roegen, N. (1971), The Entropy Law and Economic Process, Cambrige, Mass.: Harvard University Press.

Gunter, P. (2010), The Blue Economy: 10 years – 100 innovations – 100 million jobs, Publisher: Paradigm Publications.

IMF (2013), Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries, online at: http://www.imf.org/external/np/pp/eng/2013/050913.pdf.

McDonough, W., Braungart, Michael (2002), Cradle to Cradle: Remaking the Way We Make Things, North Point Press, ISBN 0-86547-587-3.

Norton, B. (1992), Sustainablity, human welfare and ecosystem health. Environmental Values 1(2), pp.97-111.

Socolow R. (Editor), Andrews, C. (Editor), Berkhout, F. (Editor), Thomas, V. (Editor), Moomaw, R. W.(1997), Industrial Ecology and Global Change. Cambridge, UK,Cambridge University Press.

Stahel, W.R. (1994), The Utilisation-Focused Service Economy: Resource Efficienty and Product-Life Extension, p.p. 178-190 of the book “The Greening of the Industrial Ecosystems”, Allenby, Braden R. and Richards, Deanna J. Editors, National Academy of Engineering, National Academy Press, Washington, D.C.

Stahel W. R. (2010), The Performance Economy, Palgrave Macmillan London.

Stahel, W. R., Reday-Mulvey, G. (1977), The potential for substituting manpower for energy: final report 30 July 1977 for the Commission of the European Communities, Publisher: Battelle, Geneva Research Centre, Geneva, Switzerland.

***, (2016), Circular Economy In India: Rethinking Growth For Long-Term Prosperity, Ellen MacArthur Foundation Report (2016), online at: https://www.ellenmacarthurfoundation.org/publications/india.

***, (1987), Our Common Future, World Commision on Environement and Development, New York: Oxford University Press.

***, World Bank, United Nations Department of Economic and Social Affairs (2017), The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries. World Bank, Washington, DC. World Bank. https://openknowledge.worldbank.org/handle/10986/26843 License: CC BY 3.0 IGO.

***, SUN Institute Environment & Sustainability, Ellen MacArthur Foundation Report (2017), Achieving ‘Growth Within’. Online at:https://www.ellenmacarthurfoundation.org/publications/achieving-growth-within.

***, European Academies' Science Advisory Council (EASAC) policy report 30 (2016), Indicators for a circular economy, building science into EU policy, Deutsche Akademie der Naturforscher Leopoldina, Halle (Saale), Germany, November, ISBN: 978-3-8047-3680-1, online at: www.easac.eu.

SUSTAINABLE PRECISION FARMING FOR THE AGRICULTURE OF THE THIRD MILLENNIUM

Alessandro ARIOLI[116], PhD

Abstract

The present horizons of the “agriculture of the third millennium” show new scenarios of integration and synergy among different sciences, which contribute to create an “holistic” approach to the global challenges “worldwide food security”. This integration takes inspiration from the gloCal approach (“think global, act local”), in the aim of developing new tools for the implementation of new technologies in the agricultural sector, which is traditionally “low permeable” to scientific innovation. These new technologies allow territorial stakeholders to adapt the traditional supply-chains to some of the most important challenges of the third millennium: (i) the food security above all; (ii) the climatic change, (iii) the water conservation, (iv) the calibration of low-impact technologies, (v) the application of sustainable biotechnologies, (vi) the customization of energy production from renewable sources. This works represents a wide outlook of the main topics of the sustainable development through a win-win new international agricultural behaviour, whereas the concept of sustainability is shared among scientific, technical, economical, ecological and social-rural contributions.

Key words: agriculture, food, sustainability, farming.

JEL Classification: Q01, Q13, Q56

Precision Farming Management and Crop Driving through Flying Drone Applications

Precision farming or agriculture (PA) or satellite farming or site specific crop management (SSCM) is a farming management concept based on observing, measuring and responding to inter and intra-field variability in crops. The goal of precision agriculture research is to define a decision support system (DSS) for whole farm management with the goal of optimizing returns on inputs while preserving resources. Among these many approaches is a phytogeomorphological approach which ties multi-year crop growth stability/characteristics to topological terrain attributes. The interest in the phytogeomorphological approach stems from the fact that the geomorphology component typically dictates the hydrology of the farm field. The practice of precision agriculture has been enabled by the advent of GPS and GNSS. The farmer's and/or researcher's ability to locate their precise position in a field allows for the creation of maps of the spatial variability of as many variables as can be measured (e.g. crop yield, terrain features/topography, organic matter content, moisture levels, nitrogen levels, pH, EC, Mg, K, etc.). Precision agriculture has also been enabled by technologies including crop yield monitors mounted on GPS equipped combines, the development of variable rate technology (VRT) like seeders, sprayers, etc., the development of an array of real-time vehicle mountable sensors that measure everything from chlorophyll levels to plant water status, multi- and hyper-spectral aerial and satellite imagery, from which products like NDVI maps can be made.

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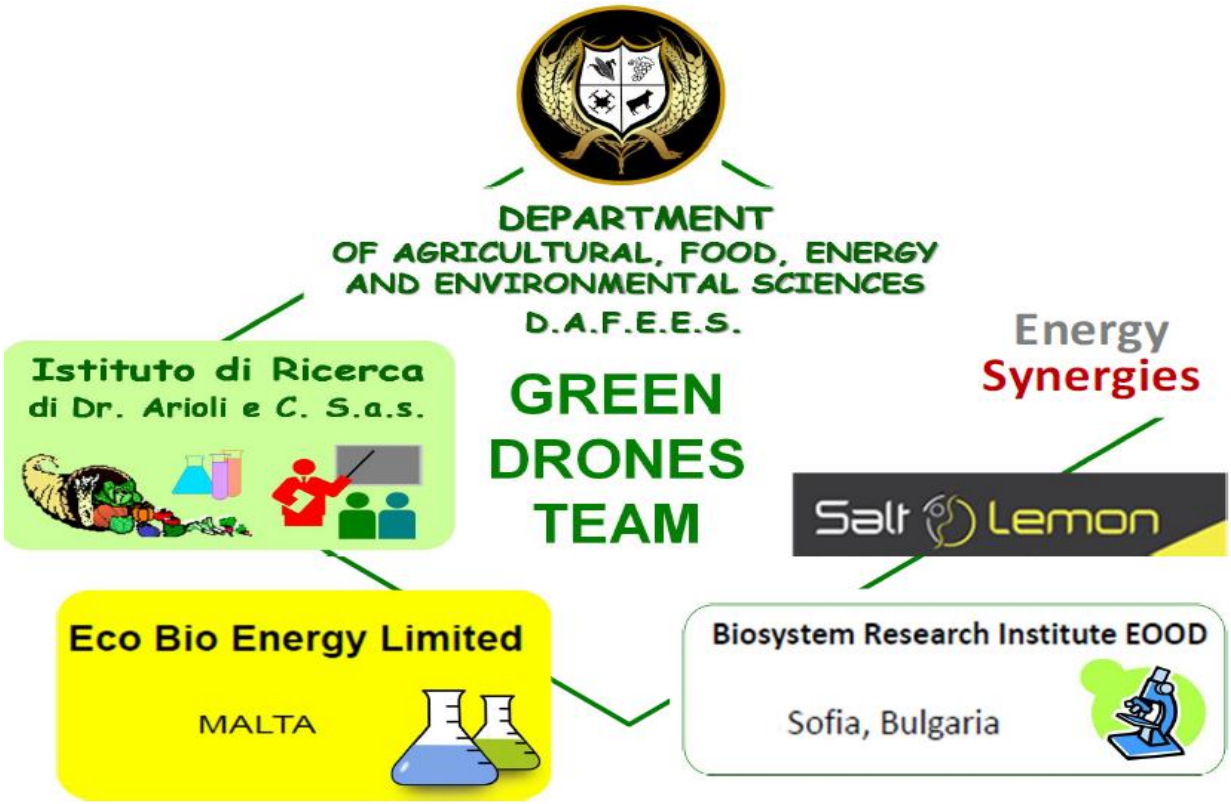
Figure 1 – Green Drones Team Structure



Source: personal contribution

Figure 2 – The Nutritional pyramid for food security strategy of the Third Millennium

Source: personal contribution

FOOD & FEEDSTUFF CROPS IN VILLAGE PROJECT FARMING for the Third Millennium

MAIZE for human food
(Zea mays indurata)

MAIZE for feed and no-food
(Zea mays indentata)
for maize silage (animals & anaerobic digester)

GROUND-NUT (Peanuts)

High oleic content.
Drip-irrigated crop.
Dry seeds for human food.
Oil-cake for feedstuff for animal breeding, oil for food.

SUNFLOWER
MULTI-PURPOSE OIL CROP
(Helianthus annuus)

High-oleic content in new hybrids.
Not irrigated crop.

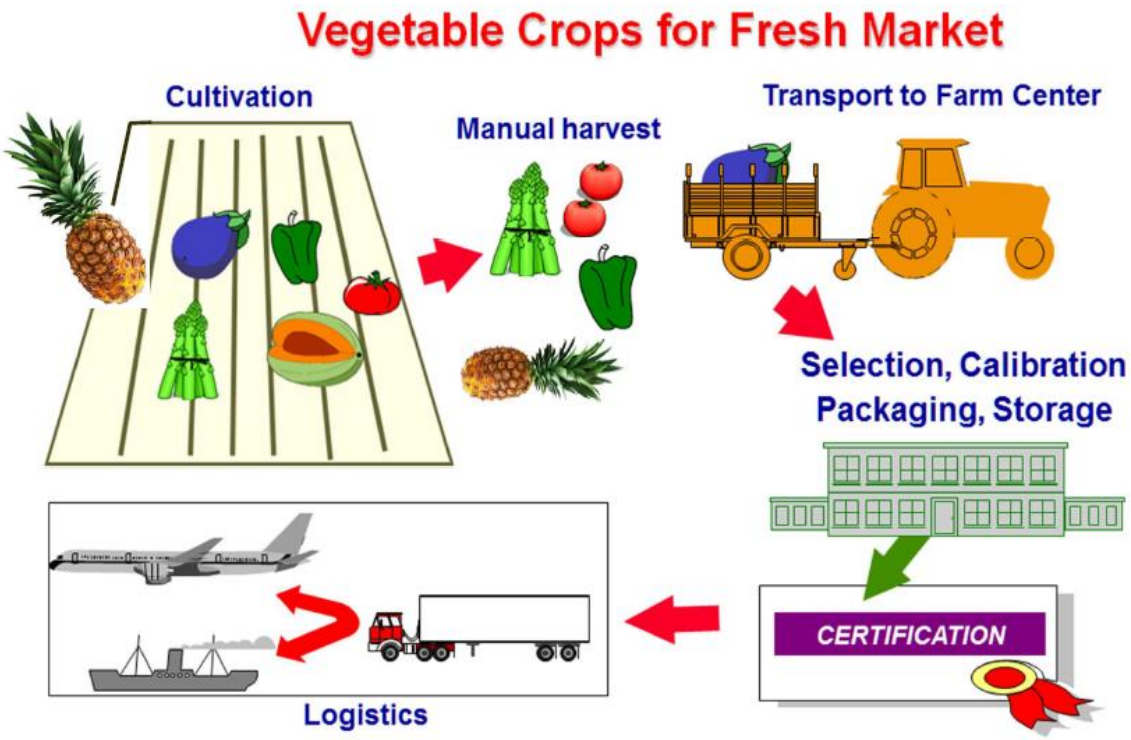
Sorghum
High-fibre content in new hybrids.
Not irrigated crop, or drip irrigation.

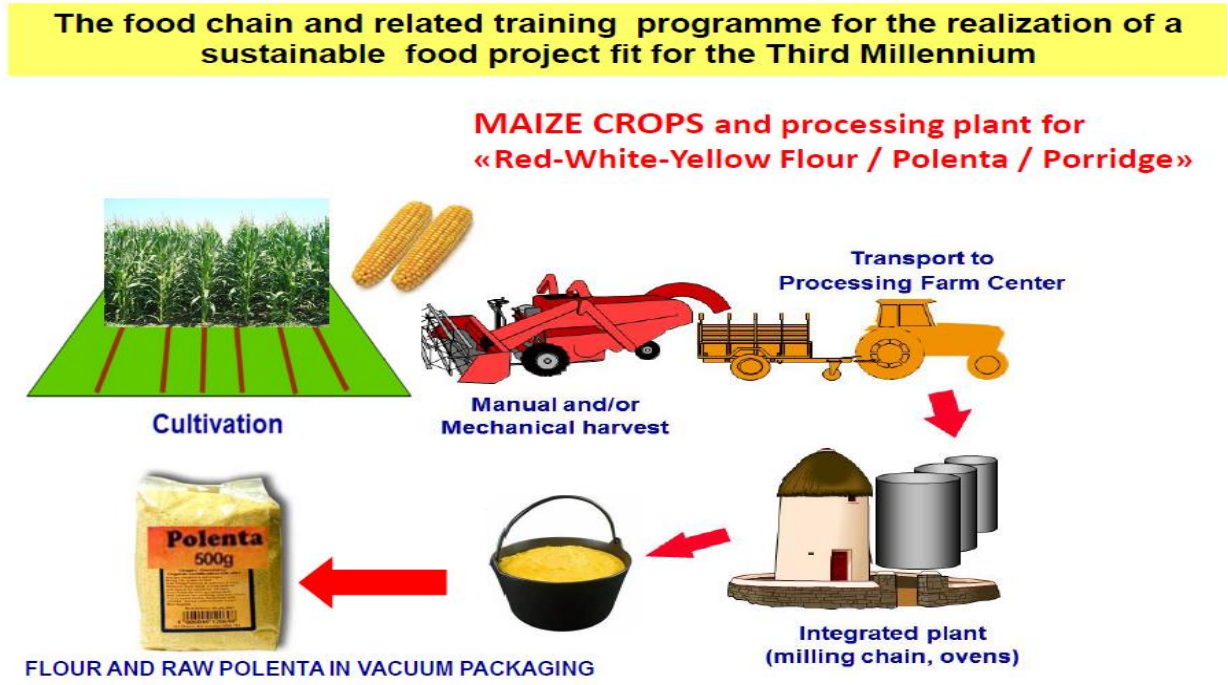
High quality dwarf tomato for fresh market and dehydrated tomatoes

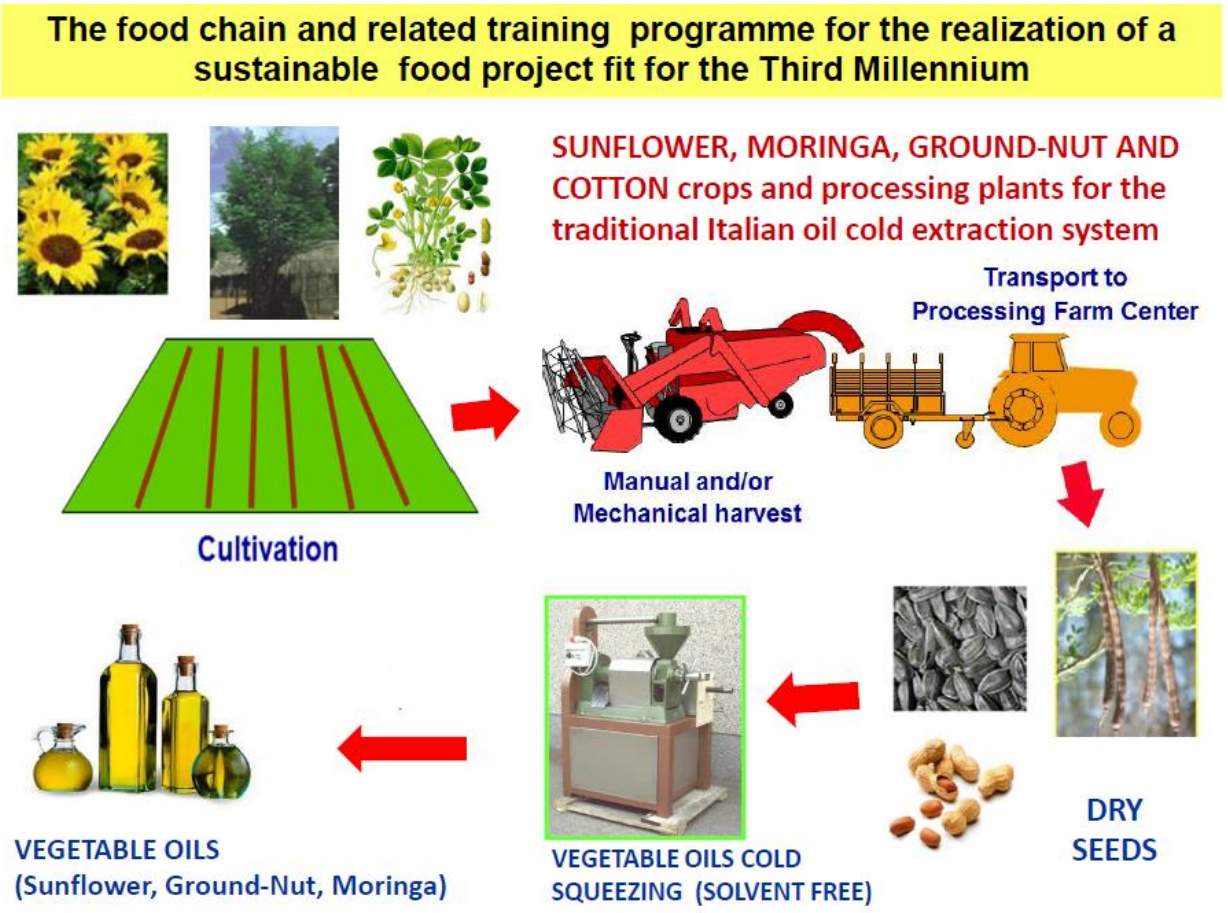
Not-irrigated crops = use of biodegradable plastic mulching.

Irrigated crops = use of drip irrigation with fertirrigation.

The food chain and related training programme for the realization of a sustainable food project fit for the Third Millennium




The food chain and related training programme for the realization of a sustainable food project fit for the Third Millennium
MAIZE CROPS and processing plant for
«Red-White-Yellow Flour / Polenta / Porridge»
Transport to
Processing Farm Center
Cultivation
Manual and/or
Mechanical harvest
Polenta
500g
Integrated plant
(milling chain, ovens)
FLOUR AND RAW POLENTA IN VACUUM PACKAGING


The food chain and related training programme for the realization of a sustainable food project fit for the Third Millennium
SUNFLOWER, MORINGA, GROUND-NUT AND
COTTON crops and processing plants for the
traditional Italian oil cold extraction system
Transport to
Processing Farm Center
Manual and/or
Mechanical harvest
Cultivation
DRY
SEEDS
VEGETABLE OILS COLD
SQUEEZING (SOLVENT FREE)
VEGETABLE OILS
(Sunflower, Ground-Nut, Moringa)

Source: personal contribution

Precision farming or agriculture (PA) or satellite farming or site specific crop management (SSCM) is a farming management concept based on observing, measuring and responding to inter and intra-field variability in crops. The goal of precision agriculture research is to define a decision support system (DSS) for whole farm management with the goal of optimizing returns on inputs while preserving resources.

Among these many approaches is a phytogeomorphological approach which ties multiyear crop growth stability/characteristics to topological terrain attributes.

The interest in the phytogeomorphological approach stems from the fact that the geomorphology component typically dictates the hydrology of the farm field.

The practice of precision agriculture has been enabled by the advent of GPS and GNSS.

The farmer's and/or researcher's ability to locate their precise position in a field allows for the creation of maps of the spatial variability of as many variables as can be measured (e.g. crop yield, terrain features/topography, organic matter content, moisture levels, nitrogen levels, pH, EC, Mg, K, etc.).

Precision agriculture has also been enabled by technologies including crop yield monitors mounted on GPS equipped combines, the development of variable rate technology (VRT) like seeders, sprayers, etc., the development of an array of real-time vehicle mountable sensors that measure everything from chlorophyll levels to plant water status, multi- and hyper-spectral aerial and satellite imagery, from which products like

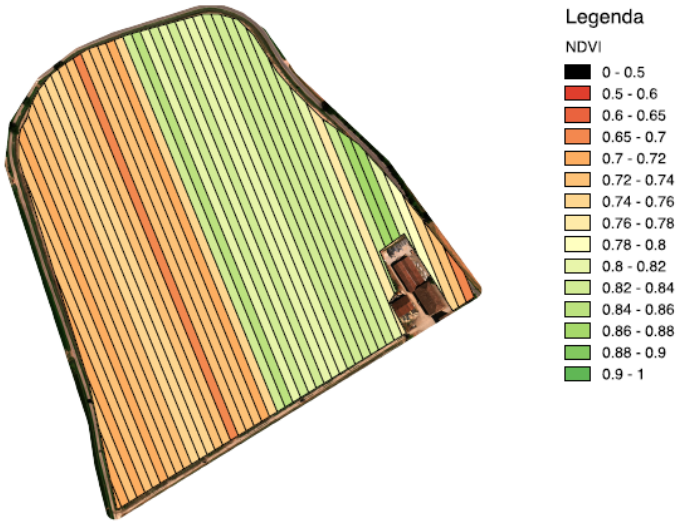
NDVI maps can be made.

The food chain and related training programme for the realization of a sustainable food project fit for the Third Millennium
TOMATO CROP (open air)
MANUAL HARVEST
TRANSPORT TO FARM CENTER
PROCESSING
CERTIFICATION
ALUMINUM BAG, LAMINATED 300 GRAMS 200 mm x 150 mm
LOGISTICS TO MARKET
HIGH QUALITY TOMATO FRESH SAUCE 12°BRIX
«LONG LIFE - 1 YEAR SHELF-LIFE» AT ENVIRONMENTAL TEMPERATURE (NO COLD STORE)

Source: personal contribution

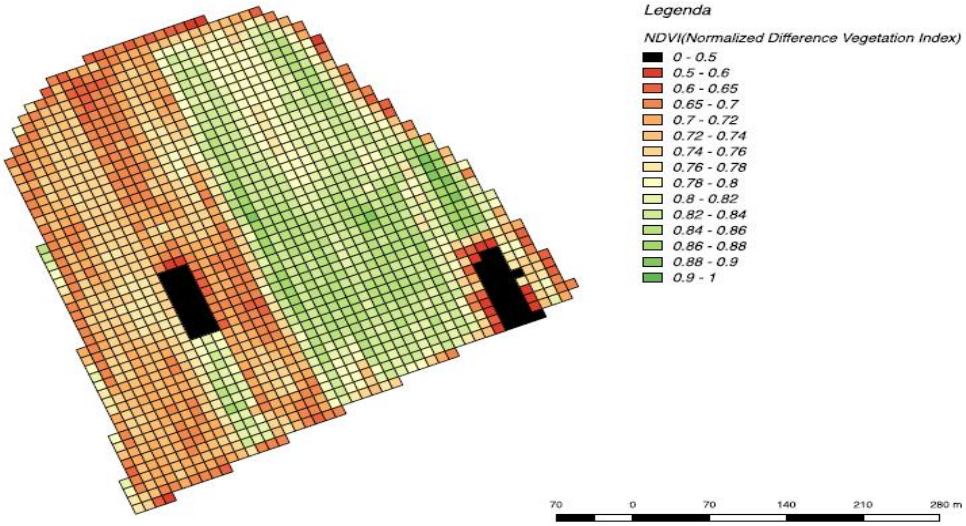
Elaboration – NDVI of Tomato Crop in Northern Italy (View July 12th, 2016)

The elaboration through a specific dedicated software allows to DIVIDE THE PLOT INTO MANY «STRIPES» of the same width, for the specific «Crop Nutrition and Irrigation Management» according to the NDVI MAPS obtained through drone's monitoring. The Grower is now able to customize the crop management for water and fertilizers according to the specific «state of the art» of the vegetative condition of each «stripe» of soil.



Source: personal contribution

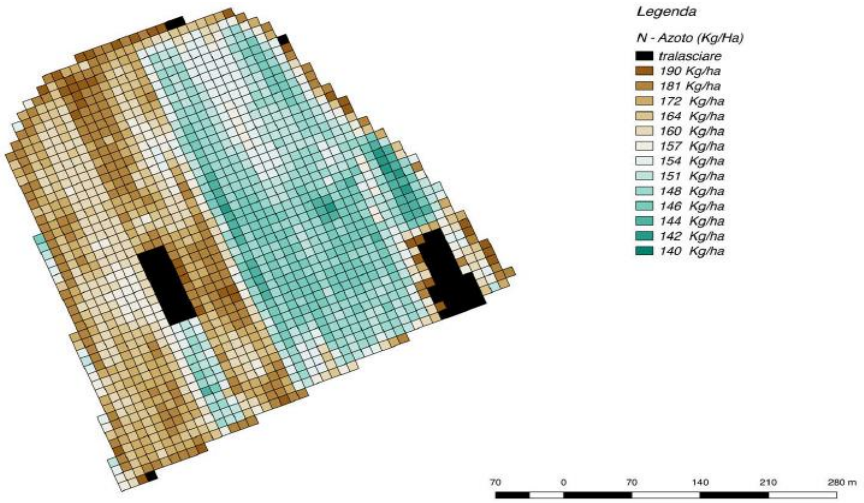
The Grower is now able to customize the fertilization before the transplant of tomato seedlings in harmony with the performances of the «Variable Ratio Fertilizing Spreaders». Each small-square represents mt (10 x 10) of soil surface 100 sq. mts).



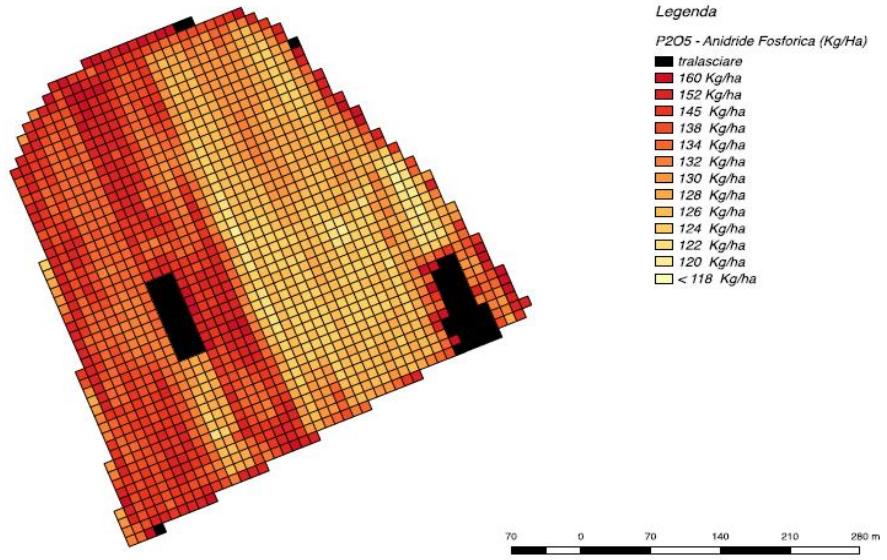
Source: personal contribution

SITUATION OF NITROGEN AVAILABILITY INTO THE SOIL ACCORDING TO THE «STATE F THE ART» OF PLANTS' VEGETATION IN THE SINGLE PLOT.

Also here each small-square represents mt (10 x 10) of soil surface (100 sq. mts).

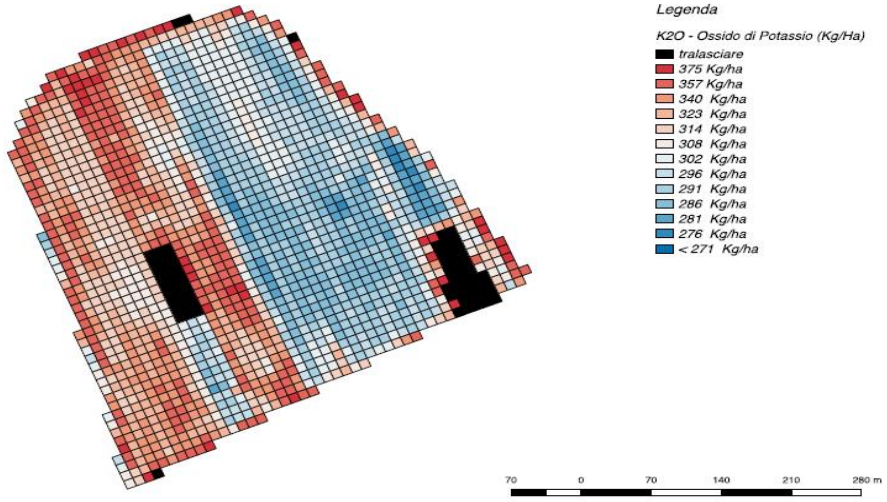


SITUATION OF PHOSPHORUS AVAILABILITY INTO THE SOIL ACCORDING TO THE «STATE F THE ART» OF PLANTS' VEGETATION IN THE SINGLE PLOT

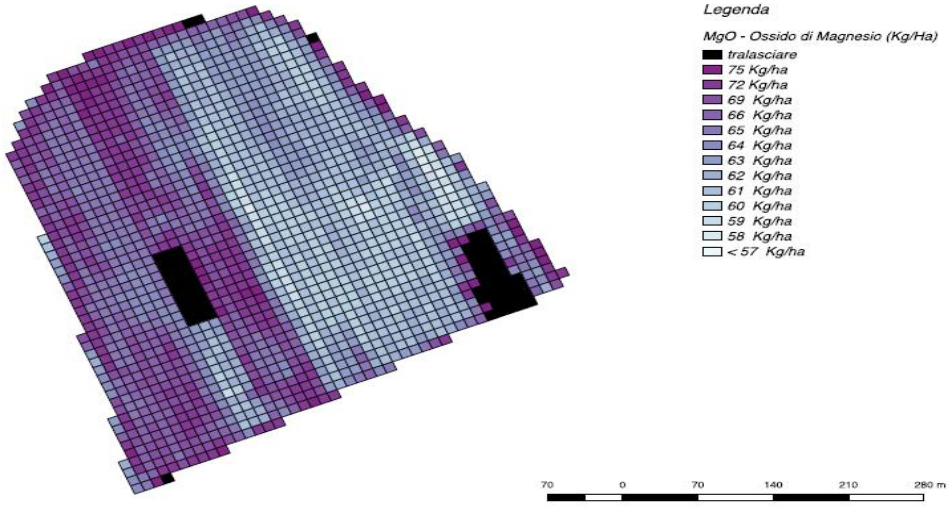


Source: personal contribution

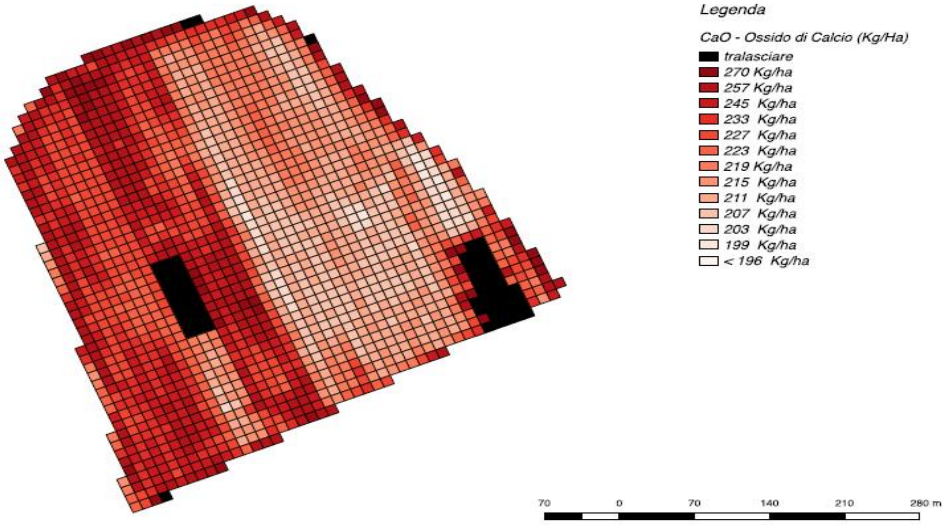
SITUATION OF POTASSIUM AVAILABILITY INTO THE SOIL ACCORDING TO THE «STATE F THE ART» OF PLANTS' VEGETATION IN THE SINGLE PLOT



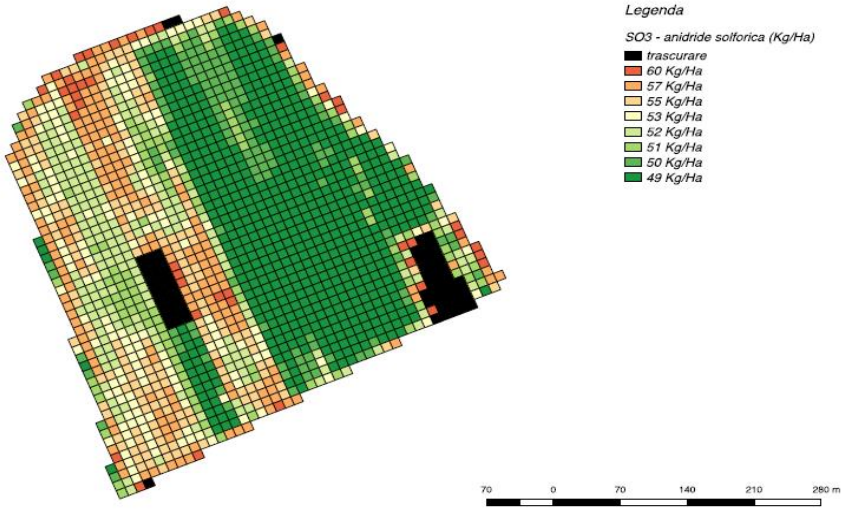
SITUATION OF MAGNESIUM AVAILABILITY INTO THE SOIL ACCORDING TO THE «STATE F THE ART» OF PLANTS' VEGETATION IN THE SINGLE PLOT.



SITUATION OF CALCIUM AVAILABILITY INTO THE SOIL ACCORDING TO THE «STATE F THE ART» OF PLANTS' VEGETATION IN THE SINGLE PLOT



SITUATION OF SULPHUR AVAILABILITY INTO THE SOIL ACCORDING TO THE «STATE F THE ART» OF PLANTS' VEGETATION IN THE SINGLE PLOT.



«Precision Farming» Technology Through Flying Frones for the Optimization of Harvest Timing in Dwarf Tomato Crops

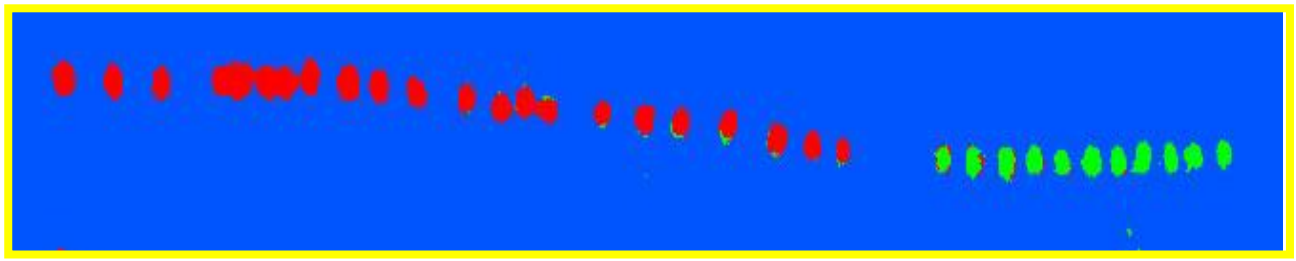
In DWARF TOMATO CROPS, usually inserted into «vertical supply chains» for the coordination between Farmign and Processing, it is strategic toidentify in the best possible way the right moment for the start of harvest, either manual or through automatic machinery. Entering into the field for harvesting with high percentage of unripe tomato fruits (as well as in case of many other perishable fruits) means to loose product and to obtain low quality in terms of food safety, organoleptic characteristics, flavours, colors, sugars, taste, shelf-life, nutraceutical contents. For DWARF TOMATOES FOR PROCESSING (sauces, cubes, concentrates, juices, etc.) the Grower's profit is strictly connected to the percentage of tomatoes that he is able to harvest and to send to the processing facility. The use of dedicated new Drone Monitoring Technologies allows to obtain SPECIFIC VERY DETAILED MAPS related to the ASSESSMENT OF EACH SINGLE TOMATO FRUIT OF THE PLOT, with the classification of each single «pixel» of the image of any tomato fruit according to the «colours scale» used by the harvesting machinery for the acceptance or the exclusion of ripe / unripe tomatoes.

CALIBRATION OF DRONE's MONITORING ACCORDING TO RIPE / UNRIPE TOMATOES CHROMATIC SCALE

Figure 3 - Aerial view from Drone related to: RED COLOR of tomato fruits on the left = Harvested Accepted Tomatoes. GREEN COLORS of tomato fruits on the right = Refused Tomatoes.

Source: personal contribution

Figure 4 - Detail of elaborated colors for ACCEPTED / REFUSED tomato fruits on blue background.



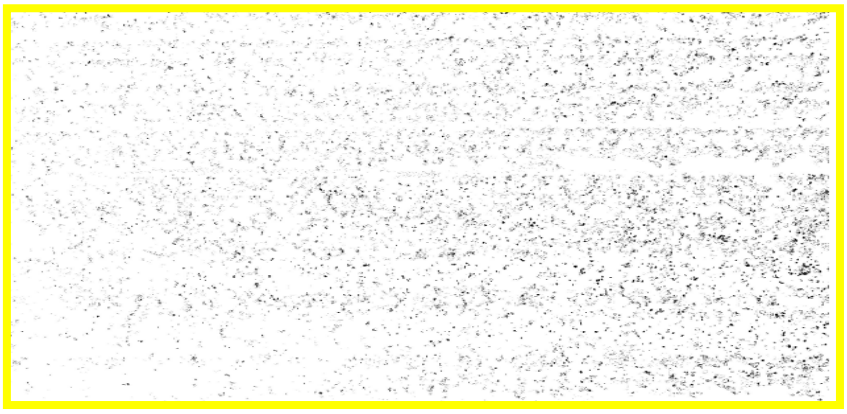
Source: personal contribution

Propaedeutical Picture of Drone's Monitoring Ready to the Definition of Ripe/Unripe Tomatoes by Chromatic Scale

Figure 5 - Tomato field with the majority of ripe fruits(aerial view from Drone).

Source: personal contribution

Figure 6 – Unripe tomatoes of the plot: the black pixels represent unripe tomatoes



Source: personal contribution

FINAL TABLE: The table resumes the final numeric values, automatically calculated by a specific software which allows to «count» the different categories of pixels dividing them in ripe / unripe. The fila result allows the Grower to MAKE THE RIGHT CHOICE FOR THE START OF THE HARVEST, minimizing the losses and increasing the profit.

Table 1

The final numeric values

% Pixel of background ("non-tomato pixels")	89,325%
% Pixel RED RIPE TOMATOES	7,807%
% Pixel GREEN UNRIPE TOMATOES	2,868%
# Pixel RED RIPE TOMATOES	34.443
# Pixel GREEN UNRIPE TOMATOES	5.308
# Pixel (RED + GREEN) TTOMATOES	39.751
# RED TOMATOES / TOTAL # TOMATOES	86,64%
# GREEN TOMATOES / TOTAL # TOMATOES	13,36%

Source: personal contribution

SUSTAINABLE DIMENSION OF THE FDI

Camelia BĂLTĂREȚU[117]

Abstract

The governments of the developing countries have changed their focus regarding FDI, in an attempt to attract as much as possible such FDI is crucial for sustainable development. The emphasis is placed upon creating/identifying the policies and instruments aimed to selection such FDI that maximises the benefits for sustainable development in the respective countries. The concept of 'sustainable FDI' refers to FDI that maximises sustainable development benefits while minimising negative impacts.

Keywords: FDI, sustainable, development

JEL classification: Q01,F21, E22

Introduction

The role of foreign direct investment (FDI) as a catalyst for the development has been and is being debated in the last decades by developing country governments. Their focus was on attracting foreign direct investment, but especially on attracting as much as possible the foreign direct investment which constitute the significantly support for the sustainable development in the developing countries.

FDI can, without doubt, contribute to achieving certain objectives within a sustainable development strategy (e.g. economic growth, better environmental practice or poverty reduction) and as such it could be used as part of this strategy. Attracting FDI is not in itself a strategy for sustainable development at a national level.

Not all the countries that have benefited from attracting investments in their economy have also been successful impact on the sustainable development.

There are many studies that prove the existence of a significant number of potentially negative impacts on sustainable development. Some studies even highlight negative economic aspects such as the increased environmental degradation, a lowering of environmental and labour standards, crowding out local businesses, low technological capacities, high levels of transfer of utilities or the anticompetitive practices, with their consequent effects on the balance of payments. In addition, there is a significant number of potentially negative impacts on sustainable development.

The Concept of Sustainable Development

During the 1970s and 1980s the enormous danger of environmental problems was increasingly recognized. In 1980 the *International Union for the Conservation of Nature* published a world conservation strategy that included one of the first references to sustainable development as a global priority[6] and introduced the term "sustainable development".

The World Conference on Environment and Development (1987) has defined sustainable development as development that meets present needs without comprising the ability of future generations to meet their own needs. This concept mainly consists of three dimensions, such as economics, social and environmental.

In 1987 the *United Nations World Commission on Environment and Development* released the report *Our Common Future*, commonly called the Brundtland Report. The report included what is now one of the most widely recognised definitions of sustainable development:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

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-· The concept of 'needs', in particular, the essential needs of the world's poor, to which overriding priority should be given;

- The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs." (World Commission on Environment and Development, *Our Common Future* (1987)).

Since the Brundtland Report, the concept of sustainable development has developed beyond the initial intergenerational framework to focus more on the goal of "socially inclusive and environmentally sustainable economic growth".

Under the principles of the *United Nations Charter* the *Millennium Declaration* identified principles and treaties on sustainable development, including *economic development, social development* and *environmental protection.*

The Brundtland Commission draws upon several notions in its definition of sustainable development, which is the most frequently cited definition of the concept to date.

The principle of sustainable development was developed starting from binding, association the traditional economic objectives to environmental concerns by recognizing the needs of future generations. The key element in the definition is the unity of environment and development.

In the following decades, the principle 0f the sustainable development has developed and also been applied to social and economic areas as well as environmental. The UN 2016 Millennium Development Goals state the wider principles of sustainable development:

- to eradicate extreme poverty and hunger;
- to ensure healthy lives and promote well-being for all ages;
- to achieve universal primary education;
- to promote gender equality; and
- to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Sustainable development is therefore defined as a process of meeting human development goals while sustaining the ability of natural systems to continue to provide the natural resources and ecosystem services upon which the economy and society depends.

The United Nations Conference on Trade and Development, UNCTAD (2014) has promoted foreign direct investment as a potential driver for Sustainable Development.

The goals of the Sustainable Development have become an important mission, targeting many countries around the world.

In September 2015, the United Nations General Assembly formally adopted the "universal, integrated and transformative" *2030 Agenda for Sustainable Development,* a set of *17 Sustainable Development Goals (*SDGs). The goals are to be implemented and achieved in every country from the year 2016 to 2030.

The Concept of Sustainable FDI

There is not in the literature a clear definition of the sustainable FDI. Sustainable FDI is a relatively new term that is meaningful when considered in conjunction with sustainable development. "Sustainable FDI" was defined in terms of four dimensions:

- economic development (linkages, technology transfer, training, etc.);
- environmental sustainability (minimizing the adverse environmental impacts of investments, mobilizing environmental technologies for conservation, etc.);
- social development (labor and employment standards, community health, education, training, etc.);
- good governance (fair and efficient negotiations, contracts, etc.).

More generally, sustainable FDI is FDI that contributes to a host country's sustainable development.

According to GUIDANCE PAPER ON EVALUATING SUSTAINABLE FOREIGN DIRECT INVESTMENT, 2012,

"Sustainable FDI can be defined as FDI projects that yield profits sufficient to maintain effective corporate engagement without harming vital host country interests while producing positive net benefits for the country's long-term development goals as evaluated on prioritized economic, environmental, social and governance indicators."

However, the scope of the concept of sustainable FDI remains very restricted, focusing solely on economic aspects of sustainable development, particularly on attracting FDI of high value added or with positive spillover effects on the domestic economy. The social and environmental aspects of sustainable development have received very little attention. The two assessment criteria that have been paid a certain amount of attention are the creation of local employment and, to a lesser extent, the transfer of environmentally-friendly technology.

Attracting a greater volume of investment is not necessarily disadvantageous from a sustainable FDI perspective. FDI capital is needed in order to make at least some positive contribution to any of the dimensions of sustainable FDI.

To maximize the amount of FDI a country receives should not be an objective on its own accord, because quantity alone does not ensure the potentially positive effects that FDI can have on sustainable development. Furthermore, linkages among the four dimensions of sustainable FDI should not be ignored. For example, directing investment to disadvantaged regions within a country was frequently encountered in investment promotion strategies and was supported through incentives. This of course can lead to greater economic opportunities in these regions with the potential of reducing income inequality in the country, a social component of sustainable FDI.

FDI needs to be sustainable itself to enable sustainable development. For example, value chains are often a neglected dimension of sustainable FDI; any given FDI project is only as sustainable as its upstream suppliers of intermediate inputs and services. FDI has an important role to play in helping to achieve sustainable development.

To make FDI sustainable is necessary an accompanying policy framework:

- Policy frameworks of international organizations
- Policy frameworks of national organizations
- Policy frameworks of governments.

Numerous industry codes, standards, investment agreements, voluntary instruments and company codes on the international and domestic levels are available.

One proposed methodology to assess sustainable FDI involves[118]:

- Choosing top ten priority development objectives
- Self-assessment of investment climate
- Identifying target sectors for FDI promotion
- Incentives only after rigorous cost-benefit analysis, and transparency
- Qualitative targeting of investors (responsible)
- Exclusion conditions test
- Project assessment matrix, with development priority weighting (and adjusted for cost of incentives).

[118] *John Kline (2012), Guidance paper on evaluating sustainable FDI, Millenium Cities Initiative Working paper series, no 12/2012*

Developing countries often have no guidelines, and many developed states have no binding rules. The sustainable development policy framework for a country should consider and[119]:

a. directing private capital towards investment in renewable energy and other sustainability technologies and businesses by using the tax and financial incentive system (government purchasing power and other financial tools);

b. Increase investment in sustainability infrastructure (such as smart grids, electric vehicle charging stations, mass transit, waste management facilities, water filtration systems and sewage treatment systems);

c. the need for a basic science fund for renewable energy and renewable resource technology;

d. minimizing destruction of ecosystems (regulate land use and other private behaviors);

e. involve key international, national and local stakeholders, including the private sector, to ensure that the transition is well-managed in the real world;

f. developing and maintaining a system of generally accepted sustainability metrics for measure progress toward sustainability (This in turn should facilitate the integration of sustainability into overall management of the economy along with the setting of national sustainable economic policy); and

g. Transfer sustainability technologies and policy best practices to other countries.

If sustainable development is to be an end goal for FDI, business attraction, and economic development, the traditional investor attraction tools need to adapt to encourage sustainable investment. Tax credits, grants, training programs, capital investment funds, low cost loans, infrastructure grants and the like, as economic development incentives, have been used for decades in the aim of encouraging investment decisions.

The activities most commonly incentivized, which are relatively easily measured, now focus on energy, recycling, and other aspect of environmental sustainability:

- Installing pollution control equipment;
- Investing in energy-efficient buildings or components;
- Manufacturing products from recycled materials;
- Investing in systems to capture items from a company's waste stream for recycling or use by others;
- Undertaking environmental remediation activities;
- Adapting manufacturing or other processes to use alternate energy sources such as solar, wind, geothermal wind, and biomass; and
- Producing alternative fuels for vehicles or using alternative fuels to power a company's own fleet.

Conclusions

Developing countries' governments have changed their focus regarding FDI in an attempt to enhance sustainability, seeking to attract as much FDI as possible, increasing emphasis is placed upon creating policies and instruments aimed at maximizing the 'quality' of FDI in terms of its impact upon sustainable development in the respective countries.

There is no consensus on which sets of policies and instruments best attract more sustainable FDI and indeed the concept of sustainability itself is the subject of strong debate and ongoing research.

Well-allocated, high-quality foreign investment can help made current economic practices more sustainable, while inappropriate investment can destabilize communities and the environment.

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[119] (2017), Loewendahl, H., Kollinsky, C., Van den Berghe, D., Sustainable Development and FDI: Towards a Practical Framework to Implement the Principle of Sustainable Development into Investment Promotion Strategy

Developing countries are becoming increasingly aware of the importance of the quality of FDI in terms of its impact on sustainable development in their countries. As such they have sought to identify policies and instruments that enable the selection of the type of FDI that maximises the benefits for sustainable development in the recipient country.

Bibliography

Afrin, Z., (2004), Foreign Direct Investments and Sustainable Development in the Least-Developed Countries;

Amal, M., (2016), Foreign Direct Investment in Brazil - Post-Crisis Economic Development in Emerging Markets;

Kline, J. (2012), Guidance paper on evaluating sustainable FDI, Millenium Cities Initiative Working paper series, no 12/2012;

Loewendahl, H., Kollinsky, C., Van den Berghe, D., (2017), Sustainable Development and FDI: Towards a Practical Framework to Implement the Principle of Sustainable Development into Investment Promotion Strategy;

Ridzuan, A.,R., Izmail, N., A., Hamat, A.,F.,C., (2017), Does Foreign Direct Investment Successfully Lead to Sustainable Development in Singapore?

Svetlicik, M., (2012), Sustainable Foreign Direct Investments: Regional Development and Transition Economies, Internationalization of Emerging Economies and Firms pp 87-114, Springer Link.

Voica, M.,C.,Panait, M., Haralambie, G.,A., (2015), The Impact of Foreign Direct Investment on Sustainable Development;

* * *, (2010), Investment Promotion Agencies and Sustainable FDI:Moving toward the fourth generation of investment promotion (Report of the findings of the Survey on Foreign Direct Investment and Sustainable Development undertaken by the Vale Columbia Center on Sustainable International Investment (VCC) and the World Association of Investment Promotion Agencies (WAIPA)).

2007-2017 FDI EVOLUTION IN ROMANIA

Camelia BĂLTĂREȚU[120]

Abstract

This paper is focused on the issue of foreign direct investment - FDI. It outlines their evolution in Romania during the 2007-2017period which coincides with the post-accession period of the country to the European Union. The analysis of the FDI evolution in Romania is not carried out in an isolated manner, but in relation to the trends registered by similar countries in Central and Eastern Europe - Bulgaria, the Czech Republic, Poland and Hungary, with an economic and political regime similar to ours before 1989. The results, taking into account the general trends recorded by FDI in the Romanian economy during 2007- 2017 period, show that the economic and financial crisis negative influenced the evolution of the FDI; starting with 2009 the trend was downward, with slight signs of adjustments over the years 2012-2013 and 2015-2016.

Keywords: FDI, investment flow, investment stock

JEL classification: F21, E22

Introduction

The objective of this article is to analyze the evolution of FDI in Romania in the last ten years, by reference to the countries of the region with a similar history and an economic and political regime similar to ours before 1989. These countries from the Central and Eastern Europe, Bulgaria, The Czech Republic, Poland and Hungary, which have also passed since 1990 through the transition process from a centralized economy to a market economy have undergone transformations of the institutional environment, that are reflected in the evolution of flows FDI. The need for this transition has led to the development of policies that attract foreign investors, foreign investment being considered a support the economic development of a country, a key factor in overcoming the gap between developing and developed countries.

Methodology and Data Sources

Using annual time series data for the period 2007-2017, the research was performed based on the statistical data obtained from documents and database regarding foreign direct investments of the National Bank of Romania and the National Institute of Statistics, from the database of the international statistics UNCTAD and from data base and documents of the European Union too.

The statistical survey on foreign direct investment in Romania in was conducted by the National Bank of Romania and the National Institute of Statistics in compliance with the methodology in the International Monetary Fund (IMF) Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6)1, 2013 being the first year for which the new methodology was applied.

The data used in the analysis covered the interval between 2007 and 2017, which means a 11-year period, period that was divided in five subintervals, as was the FDI evolution.

The analysis methods employed in data processing were the comparison method, and logical analysis.

Aspects Regarding the Dynamics of FDI in Region

In the last decade, a special importance was directed to foreign direct investment as a tool for accelerating growth and development of economies in transition. The Eastern-European countries were the destination of some significant capital inflows. As a result of the EU integration process,

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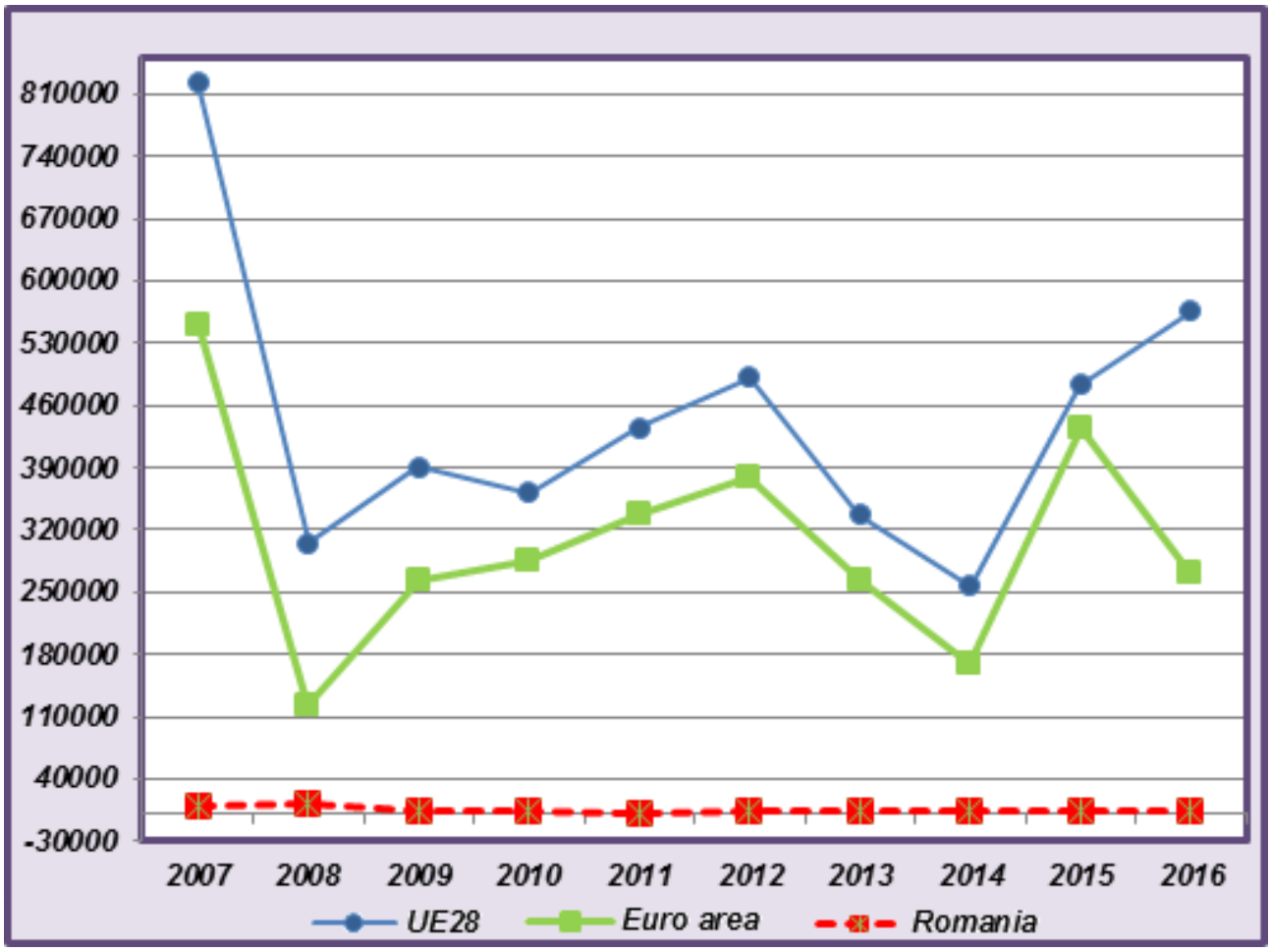
all CEE economies have accomplished profound financial and trade integration. Capital inflows utilized the economic growth capacity of the CEE nations. In many CEE economies, an extensive privatization process has taken place. The euro area continues to be a key recipient of FDI. In 2015, the euro area accounted for 20% of the global stock of FDI. Yet, in recent years, attracting FDI inflows into the euro area has become increasingly challenging and the euro area has been losing importance as an investment destination. This decline in direct investment in euro area countries has led to calls to take measures to make the euro area a more attractive investment destination. Figure 1 shows the trends of FDI inflows in Romania compared with those of the Euro area and European Union average between 2007 and 2016.

Figure 1 - Dynamics of FDI flows attracted at national level compared to the EU and euro area average in the 2007-2016 period (mil.$)



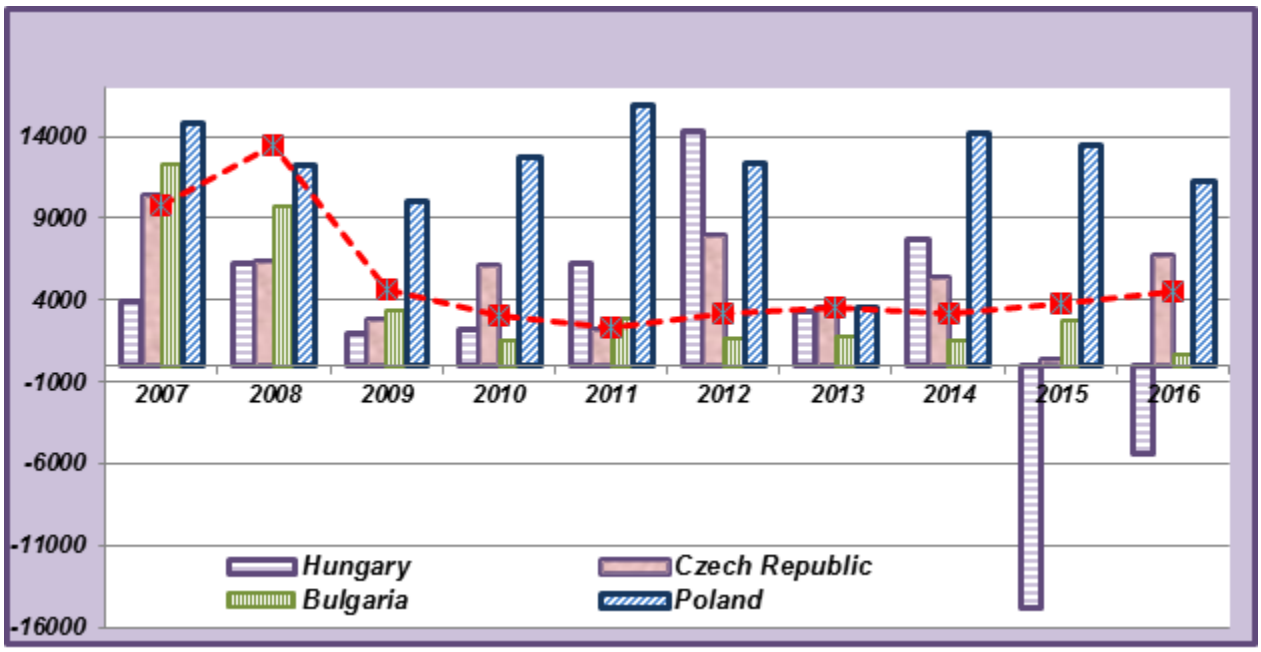
Source: own processing based on data provided by UNCTAD

It can be noticed the significant decrease in flows in 2008, both at the level of the European Union and the euro area when the impact of the economic and financial crisis was strongly felt.

Foreign Direct Investment brought in the ex-communist countries a serious inflow of capital, an entire set of management skills, new technologies, knowledge and also a lot of new jobs. It has been considered a force for European Union integration, especially for developing regions, representing an important instrument for sustain development and economic growth at regional/local level.

As a general trend, over the period 2007-2017, in all of the five economies in the region, FDI flows follow this trend, most FDI flows being attracted by Poland (see Figure 2).

Figure 2 - FDI flows in several neighboring countries (mil.$)



Source: own processing based on data provided by UNCTAD

For the CEE region, FDI flows decreased during 2009 – 2010 with 60% compared with the period 2007 – 2008, less the Czech Republic and Poland, which have an upward trend since 2009. For the period 2011 – 2012 the FDI flows to CEE countries recorded a small improvement, less Bulgaria and Poland which have a downward trend.

After 2011, between 2012 and 2015, Romania and Bulgaria attracted the slightest FDI flows due to the poor performance of the competitiveness indicators, according to the Global Competitiveness Report. In the light of the global competitiveness index published by the World Economic Forum, the Czech Republic ranks first among the five countries, according to the same report (The Global Competitiveness Index Rankings) of 2015-2017.

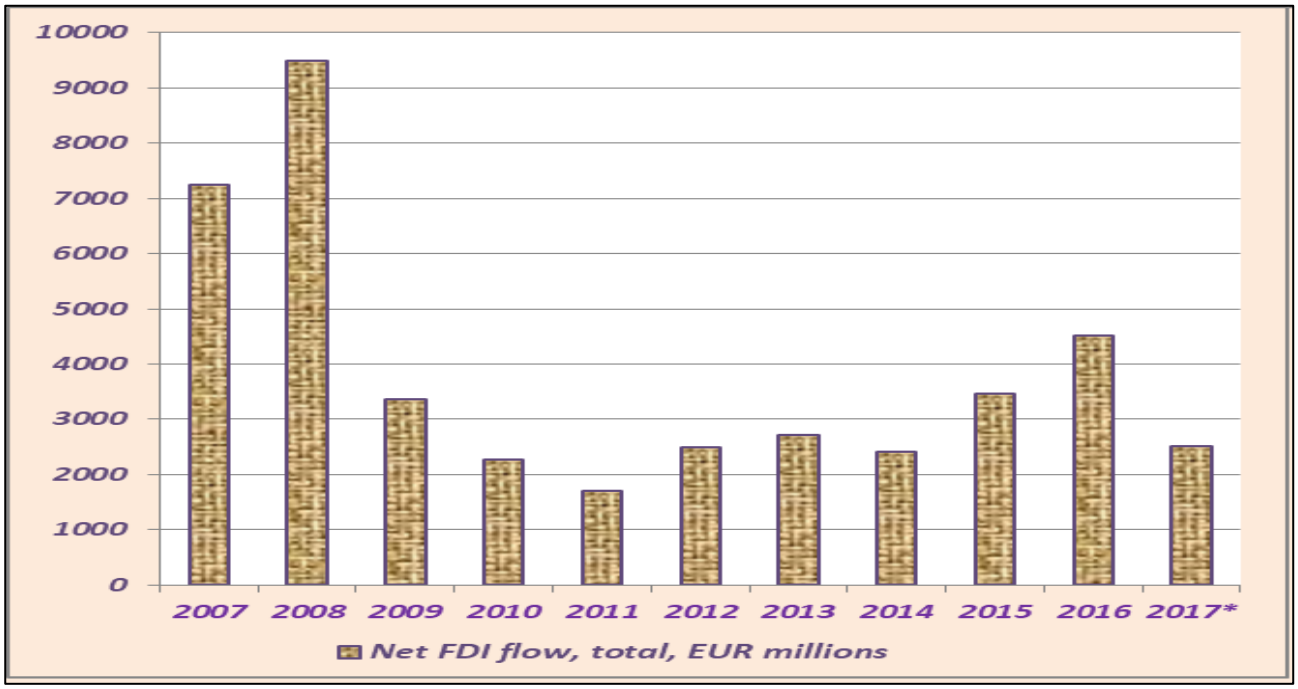
In 2015 both Bulgaria and the Czech Republic recorded a significant decrease in the flow of FDI. Although declining in 2016, Poland is far superior to the other four analyzed countries, overpasing the economic crisis more quickly compared with the others countries.

Dynamics of FDI Flows in Romania During 2007-2017

Statistics of FDI in Romania show a sinusoidal evolution, with periodic increases and decreases, caused by the lack of a real national strategy on investment. The pre-accession period of the European Union, 2003-2006, overlaps the most favorable period for attracting FDI to Romania, with FDI inflows increasing more than 4 times, due to a large privatizations registered in Romania in banking and industrial sectors such as oil and petrochemical, metallurgy and machine building.

After the accession, the trend followed by foreign direct investment in Romania was a sinuous one. According to this evolution we can analyze it on different intervals (2007-2008, 2009-2011, 2012-2013, 2014-2016, 2017…) (see the Figure 3). In 2007-2008 period the privatization in the banking sector has continued and If in 2007 the value of FDI flows of EUR 7250 million represented a decrease in FDI flows by about 20% compared to the previous year, in 2008 FDI inflows reached the highest value after 2000 - 9496 million (NBR, 2009), reaching a historical maximum. The optimism of investors in 2008 was stimulated by the improvement of the institutional and legislative framework under the auspices of the EU accession, the increase of the privatization offer and a period of economic expansion in the global economy; at that moment, Poland and Romania had clearly distanced themselves as preferred states in the top of investors.

Figure 3 - Evolution of FDI flows in Romania during 2007-2017



2017 - value for the first 6 months*
Source: own processing based on data provided by National Bank of Romania, Foreign Direct Investment in Romania, 2007-2016

Unfortunately, after 2008, the value of FDI flows is significantly decreasing (the impact of the economic and financial crisis being strongly felt), their value decreasing by almost 60%. However, in 2009, as in 2008, Romania ranked second in the region, after Poland, depending on the value of FDI inflows (see Figure 2).

2009-2011period is a period mainly evidenced by the successive diminishing of the foreign capitals that entered the Romanian economy. The fall in investment flows, being due to the impact of economic and financial crisis, continued until the end of 2011.

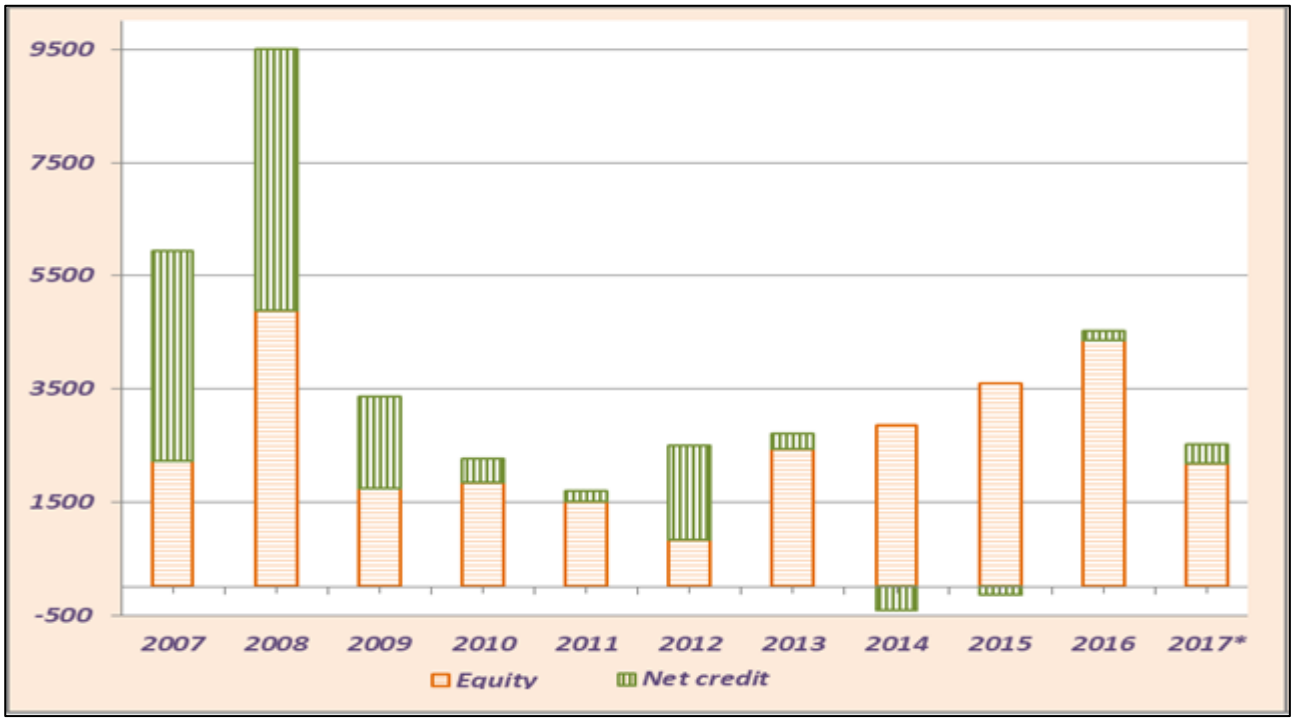
Starting 2012 we have some signs of growth in the context of government-implemented economic measures, which continue until 2014, when Romania attracts a FDI flow of USD 3 211 million net higher than the volume of FDI flows attracted in the same period by Bulgaria, but less than the volumes of FDI flows attracted by the other neighboring countries taken into account.

Follows a slight recovery period, reaching 2016 to about half of the 2006 value.

On the whole, there is a massive intensification of post-accession investments in 2008, when the largest contributions to equity were made, totaling EUR 5 265 million, which determined at the end of the year, a net FDI of EUR 9 496 million.

Regarding the analysis of the FDI flows evolution on components reveals the following: capital holdings mainly support FDI flows in Romania, less reinvested profits and net loans.

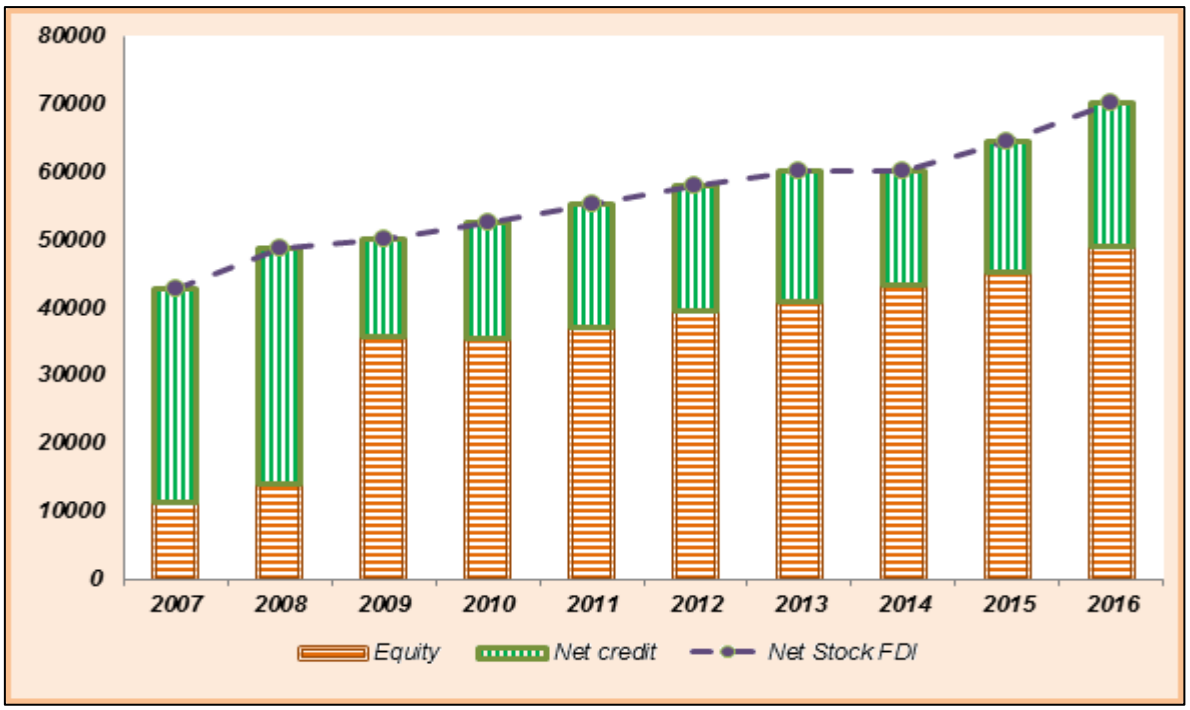
Figure 4 - Evolution of FDI flows on components (EURmillion)



2017 - value for the first 6 months*
Source: own processing based on data provided by National Bank of Romania, Foreign Direct Investment in Romania, 2007-2016

As for the evolution of the net FDI stock by components (see Figure 5), if in the first period 2007-2008 we have reported a largest net credit participation, followed over the rest of the analyzed period the equity will take the lead in the stock 's support.

Figure 5 - Evolution of FDI stock on components (EURmillion)



Source: own processing based on data provided by National Bank of Romania, Foreign Direct Investment in Romania, 2007-2016

The activity of direct investment enterprises as a whole has had a positive impact on Romania's foreign trade. In 2016 their contribution to total exports and total imports of goods standing at 74.0 percent and 66.3 percent respectively.

The top five countries ranked by the FDI balance on December 31, 2008 are Austria (18.8 %, percent of the FDI balance at the end of 2008, down from 21.4 percent in 2007), the Netherlands (17.2 percent (up from 16.3 percent in 2007), Germany (15.4 percent, up from 11.7 percent), France (8.8 percent), which maintains its 2007 share, as well as Italy, according to BNR, 2008.

In 2011, the countries that occupied the first 4 places ranked on the FDI balance as at 31 December 2011 were the Netherlands (21.7%), Austria (17.5%), Germany (11.4%) and France (9.1%), hierarchy unchanged since 2009.

Continuing with the most important economies investing in Romania, accounting for more than 50% of the total FDI stock, at 31 December 2016 were: the Netherlands (over 24%), Austria (17.5%) and Germany (over 11%).

At present, the importance of maintaining the upward trend of attracted foreign investments is all the more significant as they contribute significantly to economic growth, stimulating and strengthening internal development factors.

Conclusions

The pre-accession period to the European Union, 2003-2006 overlaps with the most favorable period for attracting FDI to Romania, the FDI flows increase more than 4 times;

In 2007, there is a fall in FDI flows of about 20% over the previous year, and in 2008 FDI inflows peaked after 2000 (9496 billion euro); Since 2008, the value of FDI flows has decreased significantly (the impact of the economic and financial crisis being strongly felt), their value decreasing by almost 60%; the downward trend continues until 2011, including a slight recovery, reaching about half of the 2006 figures in 2016;

The activity of direct foreign direct investment enterprises, as a whole, has a positive impact on Romania's foreign trade, their contribution to the exports of Romania is 70% and 60% in the achievement of Romania's imports.

Regarding the analysis of the FDI flows evolution on components reveals the following: capital holdings mainly support FDI flows in Romania, less reinvested profits and net loans.

Throughout the analyzed period we notice that the countries with the greatest impact on the share held in the FDI balance are the same: Netherlands, Austria, Germany and France, with only the hierarchy changed.

According to official statistics, the main attraction area for investors after 2007 was the industry, which means that the investments were significant both in terms of volume and in the long run. Apart from industry, other activities that also attracted significant FDI were construction and real estate transactions, trade, financial intermediation and insurance and professional scientific, technical and administrative activities and support services.

This study needs a folowing detailed analysis, including a deeper econometric approach.

Selected Bibliography

* * *, http://www.ec.europa.eu

* * *, http://www.insse.ro

* * *, http://www.bnro.ro

* * *, (2007), National Bank of Romania, *Foreign Direct Investment in Romania in 2007*

* * *, (2011), National Bank of Romania, *Foreign Direct Investment in Romania in 2011*

* * *, (2016), National Bank of Romania, *Foreign Direct Investment in Romania in 2016*

SUSTAINABLE DEVELOPMENT – FROM THEORY TO PRACTICE. AN INCURSION IN THE GLOBAL INTERNATIONAL APPROACHES.

Mioara BORZA [121]

Abstract

The approach of sustainable development concept in the socio-economic research area is one of the most significant challenges of the past 25-30 years. The specialty literature shows many discrepancies between theoretical and practical aspects of sustainable development. In addition, there are major differences between the states of the world related to the approach manner of this concept. Through this paper, we propose to realize a content analysis, based on the incursion in the implementation of sustainable development concept at global level, depending on the development level of the countries. The aim of the paper is to identify the possible causes of the differentiated approaches, as well the barriers that disrupt the easier transition from the theory to the practice.

Keywords: sustainability, society, economy, globalization, limits

JEL classification: O1, Q01

Introduction

The issue of sustainable development has become more exciting for both the research environment and the entrepreneurial one, for public administration, governments and decision-makers. More than 30 years have passed since the theoretical inception of the sustainable development concept that took place in the 80s until its application in the real world. Still, the concept's applicability with its strategies is not as visible in all the countries or in all socio-economic fields; moreover, sustainable development exists in certain areas only as a theoretical approach.

The fact that this concept has had more than 60 definitions shows the major importance granted to the concept and, simultaneously, the lack of clear understanding of what it means. The most complex definitions alongside a high interest and scientific focus aiming both the theoretical and applicable sides of the concept can be found in the literature and in the practical applications from countries with an advanced development level such as: USA, Canada, Australia, Italy, Germany, France, Sweden, etc. In turn, in the countries that are currently living the process towards economic growth, one can notice the theoretical predominance of dealing with the concept, the abuse of using it under very diverse and sometimes inappropriate circumstance and the lack of its practical approach. These aspects show the superficial understanding, the lack of understanding of the concept's essence or no interest in understanding its practical applicability.

The literature and applications on this complex theme is the subject of interest for researchers, entrepreneurs or decision makers. They want to know: how can the economic growth ensure all requirements of sustainable development, which are the most adequate indicators able to measure it, which are the main patterns and actions that must be applied in order to achieve a real sustainable development.

As regards the concept approach, the specialized literature is divided into several categories: with strict reference to the explanation of the concept, with reference to the manner of application of the its strategies and with reference to the results of the applicative measures.

The current paper aims to identify the theoretical and applied path as well as the interest shown towards the understanding and practical consideration of sustainable development. This exciting and challenging concept is at the border between natural sciences, humanities and exact sciences, being subject to the increased attention of several fields: economic, socio-demographic and ecological. The intent of the paper is to identify the chronological evolution of the concept from two points of view: the theoretical and the practical approach. At the same time, it aims to discover the

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causes that determined the different approaches by country groups, with a focus on the deep or superficial treatment of this topic that is not only consistent but also necessary for the whole world improvement.

Description of the Problem

The interest in the trend of the so-called "sustainable" development has started to manifest since the occurrence of the worrying signals regarding the depletion of resources. This is the context where, starting with the 70s-80s, an increased attention is paid towards the way resources are managed. Thus, sustainable development has been initially associated with the concern towards the environment. Research has advanced and over the last 30 years of study on the topic of sustainable development, new information and opinions have come to light regarding the nature and meaning of the relationship between environment and economy, relationship that was believed to become friendlier.

In our opinion, the key to sustainable development is the adequate management of resources, directly connected with the economic growth, increasing life quality and protection of environmental factors. Besides, the issues related to rational resource management to increase efficiency are connected to the issues of sustainability, given that each generation's resources are influenced by the previous generations' consumption (Tiezzi & Marchettini, 1999). As far as the term „sustainable development" is concerned, it is associated with other terms from the same area, with which it has more or less ties, still sufficient for it to create confusion and uncertainty. Therefore, the term in itself is subject to criticism, most probably due to its formulation. Certain views support that the association of the terms "development" and "sustainable" is a non-sense because to be sustainable includes the idea of development (Șan, 2009).

There are authors who argue that the definition is extremely generous, but also very vague, because it does not allow the achievement of strategies that incorporate the numerous problems specific for many and varied socio-economic activities (Pană, 2006, pp.111). Then, even the definitions of concept are criticized, the most known and used definition is said to be inaccurate since the stage of its formulation. Giovanetti (2011) believes that the Bruntland definition is wrong from the start, because "we have no way of knowing now what the future generations want". In this regard, we consider that the translation supports the significant nuances and give the occasion for criticism.

In the literature, sustainable development is found under the name of: sustainability, sustainable economic development, sustainable growth etc. The attention shown to this concept determined the appearance of new theoretical terms that need to be conceptualized so that they become operational. (Pană, 2006, pp. 110). There has been no consensus regarding the term used, this being the choice of the researcher or user. In the context of using a varied set of terms related to the concept, it is very important to understand its meaning. Moreover, the term of sustainable development appears in diverse areas: economy, health, education, ecology, public administration, politics. Numerous programs, strategies, management plans etc. have proposed the sustainable development as a target, without mentioning the concrete ways to do this. The specialized literature is quite abundant but it only deals with the theoretical approach of the concept.

The identification of the practical aspects of sustainable development in the entrepreneurial area is ticklish since the majority of the papers are adaptations from the literature of the countries where practical approaches are a common thing. We believe that the identification of the intrinsic meaning of the concept allows the ongoing research approach of the causes that explain why the theory is prevalent in the developing countries as well as the different approaches in the specialized literature. The essence of sustainability consists in ways of resources administration, faced to the objectives of economic growth and providing an increasingly better life quality and of the environment (Zaman&Gherasim, 2007, pp. 137). Other consider that the sustainable development is essential for the efficient business, so that the pursuit of economic growth and promotion of a healthy environment are linked in an unbreakable way (Albu, 2003). The issue on rational administration, for an efficient resources use, falls within the theme of sustainability considering that the resources of each generation depend on the consumption of previous. (Tiezzi&Marchettini, 1999)

Some authors believe that the sustainable development is the answer to a new level of expectations towards the business world by the society (Jonas & Eriksson, 2007, pp. 6). We understand that the social aspects are also integrated in the concept, alongside the environmental ones. Also, the rule of balance 3E - economy, equality, environment - validates the content of sustainability and is reduced to the environmental aspects and the assessment of the resources use by enterprises. In a nutshell, sustainable development is viewed as a specific form of balanced development, without excesses or racy rhythms. It aims at finding a balance between social-wellbeing, ecological quality and economic prosperity (Jonas & Eriksson, 2007, pp. 27) and relates to the concept of triple bottom line that means the balance of economic environmental and social responsibility in an integrated management concept (Panwar et al. 2006).

The profile literature highlights the importance of this concept, while the approach manner is different from several points of view: theoretical vs. practical, general vs. detailed, analytical vs. synthetic. If, for instance, the term “efficiency” is clear for both the USA and any West European authors and entrepreneurs, the term sustainable development is approached differently. We consider that the multilateral approach of the concept contribute to the preservation of the difficulty to understand the late transition of the specialized literature from theory to practice as well as the existence of the differences of opinion about the terminology and the application of the concept in the daily socio-economic activities.

In the last 5-10 years, the critical opinions about the lack of practical relevance of the sustainable development have become more numerous. Some authors strongly support the representativeness of economic growth, compared to sustainable development. ”Taken together, the policy of perpetual economic growth for the entire planet remained virtually intact. Since the publication of the report, the ambiguous and insubstantial slogan of 'sustainable development' has marched on worldwide, the critic concludes”. (Alexander, 2013) The recent literature indicates some weakness due to the theory excessive approach. ”The main criticism for sustainable development is the absence of systemic implementation mechanisms organizationally and financially underwritten. This is exactly where the root is of the theory’s current lameness and indefensibility; and why it is time that we stopped deliberating and expounding slogans, and turned to real actions because we do not have much time left to save the world.” (Bezgodov, 2015) Then, the term is vague and we cannot measure sustainability in any unit; and is contradictor because development and sustainability obey opposing logistics. (Bashar, 2016). Also, it is claimed too much persistence in theory because, for 20 years, it was written so much about sustainable development, without really know what is meaning. (Pascariu, 2017).

Methodology and Data Sources

The research, prevalently empirical, is qualitative and it expresses the position regarding the evolution of the concept of sustainable development against the backdrop of the transition from the theoretical to the practical approach. The qualitative, exploratory-descriptive analysis is supported by the following research methods: historiography, document analysis and interpretation. The historiography allows the identification of the questions regarding the topic under research, the understanding of its evolution path and was conducted as a bibliographical inventory. The document analysis implied the recording of specialized literature by means of mediated collection and longitudinal study. The common basis of the research methods used is represented by the bibliographical documentation and the interpretation of specialized literature in relation to the continuous observation of the practical reality. The main work hypothesis: the assessment of sustainable development from a theoretical-descriptive point of view without highlighting its practical viability risks depreciating the concept and thus, becoming a genuinely utopic approach. A general overview of the literature is performed, starting from the identification of the origins of the concept.

The performance of this approach implies an impressive workload and due to this aspect, the author attempts to identify the papers and documents published in internationally recognised databases. With the help of this filter, it proves that the number of internationally published papers on the topic of sustainable development exceeds half a million works. This represents a limitation of the current paper since the accurate analysis of the publications in this field is accompanied by the impossibility to really count the number of publications as well as to classify the numerous sub-topics of interest. We started from the classification of information sources according to the authors

known in the field of sustainable development, in the chronological order of the issuance of their papers and then we identified the most famous international scientific databases and papers from specialized reviews quoted in these international databases.

Briefly, the methodological approach of the paper does not focus on the explanation of the meaning of sustainable development but on how the concept is dealt with in the specialized literature. Even if the research position is a dynamic one, the subjectivity remains predominant. By assuming the specific limits of the qualitative research such as the difficulty to generalize the results, the subjectivity or the toilsome identification supports the research of the topic chosen for study.

Results Obtained

Following the identification and classification of the main topics associated with the concept of sustainable development (economic, social, institutional, technological aspects, human resource management, environment protection, transportation, tourism, production-consumption relationship, social responsibility, equity, population health, enterprise performance etc.) we selected the following reference points that we analyzed from the perspective of their presence in the literature:

- the territorial level of approach: national or international;
- the chronological evolution: the periods and the years of appearance of the papers;
- the treatment level: theoretical, applicative or both;
- the quantification manner: specific indicators or other measuring instruments.

Among the famous authors who initiated the orientation towards more balanced and environment-friendly economic development models, we can count: Edward Barbier, Lester Brown, Robert Costanza, Herman Daly, Partha Dasgupta, Tim Jackson, Serge Latouche, Sharad Lélé, David Pearce, Nicholas Georgescu-Roegen, Frederick Soddy. Without any doubt, their number is much higher. Each of these renowned authors has had an essential contribution to the shaping of the concept of sustainable development and the explanation of its real meaning. Moreover, several authors have tried to make sense of the concept.

Specialized international literature in this area is extremely rich and, chronologically, it includes the first mention of the risk of natural resources depletion as early as 1970. As early as 1933, Soddy remarks that any quantitative growth from the use of the productive system mechanisms must be accompanied by a decrease in resource over-consumption or the elimination of irrational consumption. Later on, Lester Brown talks concretely about building a sustainable society, and brings numerous examples and arguments. He also publishes laborious works named “plans” for the reconstruction of a healthier socio-economic world, reaching Level 4.0 where he states that ”we depend on the earth’s natural systems for goods, ranging from building materials to water, as well as for services”. In 1987, Redclift launches the topic of sustainable development from the perspective of the need to clarify it, questioning the numerous and confusing definitions. His book, ”Sustainable development - exploring the contradictions” proves to be a challenge to the scepticism in order to determine the understanding of the sustainable development concept. Redclift (2005) publishes a set of critical perspectives on sustainable development in ”Sustainable development (1987-2005): an oxymoron comes of age”. Lélé (1991) also identifies the multiple interpretations of the concept that he does not see as an advantage of its valorisation. Latouche (1998) even used the term “the imposture of sustainable development”, stating that it represents only one of the latest conceptual innovations that are part of the harsh reality of economic growth. The author is convinced of the term contradiction - development and sustainable - that he even considers to be despairing due to its excessive use.

After the 1990s, there have been issued more papers that question the pragmatism of this concept and which express some concerns about the real chance of translating into the current economic world. According to Singh (2016, pp.63) ”sustainable development has become the *buzzword* of both the academic and the business world” and ”unfortunately, sustainability has become a *fashionable* concept in theory, but it is considered extremely expensive to be put in practice by

major corporations, firms, local or national governments." Singh (2016): "what people tend to neglect and forget is the evolution of the concept of sustainability".

Although the evolution of a concept might seem unimportant, it could help us predict the future trends and flaws that will appear. It will help us ensure that the 21st century will be the *Sustainability Century* (Elkington, 1997). Some authors have some questions about the real content and practical validity of this concept: what is sustainable development, what conditions must be met to achieve it, why we are failing to achieve sustainable development etc. (Mitlin, 1992, pp. 111).

A comparative analysis between the theoretical approach and the practice of sustainable development by means of longitudinal approach in the concept evolution indicates that the theoretical aspects are well represented in the literature in a complex and multi-faceted manner, the number of studies that tackle this concept being close to hundreds of thousands. In fact, the aspects belonging to the category "one should" are numerous and generously presented. Most of the papers indicate "what" must be done in order to achieve sustainable development, in exchange very few papers present "how" it should be done to the same aim, respectively "when" it is known that such a form of development has been achieved. The comparative analysis helps us conclude that the practical, applicative aspects are seldom represented in the literature, being found almost exclusively in the reports of big size companies from developed countries. Some international companies already deal with the elaboration of the sustainability balance in addition to the accounting balance, they support specific actions of social responsibility, of environment protection etc., but they cannot tell exactly if or which level of sustainable development they have reached.

Therefore, the comparison between the theory and the practice of sustainable development at international level and by means of the longitudinal study indicates the prevalence of theory to the detriment of the practical approach.

We notice that most of the prestigious publications that opened the way to the research on sustainable development were published during 1985-1990 by authors who come prevalently from the USA, Canada, and Great Britain. The literature specific to the years after the 1990s is enriched by authors from Germany, Spain, Italy, France, New Zealand, Australia etc. and gets more practical. Initially, alarm signals have been triggered in the ecological area, and after the 2000s there have been social problems. Still, the majority of the specialized literature tackles the ecological and natural resources protection aspects even if this is not an adequate representation. According to the classification of the approaches by the origin countries of the authors, we identified the following specific results:

- In the literature from the USA and Canada, the complex models are predominant and there are numerous examples regarding the way in which the concept of sustainable development is put into practice; moreover, it presents minutely the results of the development strategies including the entrepreneurial environment and it states the existence of numerous institutions focused on the study of sustainable development and which make public the results they obtain on a regular basis;
- In the literature from New Zealand and Australia there is a huge amount of publications which present the concrete and practical aspects of sustainable development in various fields of interest;
- The Italian literature has the great merit to contain complex and numerous reports about sustainable development, including reports concluded within companies; we noticed that the presentation of the sustainability audit was performed with quite a practical smoothness and with the help of a frequently used tool in the USA entrepreneurial environment: dashboard sustainability;
- The German literature is rich in describing the application manner of the theory in the entrepreneurial area and alongside the North-European publications, it includes many practical works;
- The literature in the East European countries and in the countries that have passed for more than 25 years from the centralized economy to the market economy favours the presentation of the theories of sustainable development, namely under the form of reproducing and confirming the well-established opinions elaborated in the years 1980-1990;

Other results identified:

- The concept is tackled especially by theoreticians and researchers from the socio-humanistic field and in the developed countries the entrepreneurs respond favorably to the challenge of implementing the concept into practice while in the developing countries the entrepreneurs are more interested in return and profit aspects;
- In countries such as Romania, local or regional strategies support sustainable development especially through the way of formulation but no measures, ways and solutions are identified in order to accomplish this desideratum;
- Eurostat is very much involved in the elaboration of reports about sustainable development; this is a support in the shaping of a more accurate image of what sustainable development is;
- PhD theses and case studies have been published on this topic; the majority aim to identify the meaning of concept and to prove the need for enterprises to go for this type of development.

From the perspective of quantifying the level of sustainable development and given the fact that until now the indicators are the most adequate measuring tools, there is a partial compliance between the indicators set up by different institutions. We identified indicators of UNO, of Eurostat, of different national institutes of statistics. Both the number and the classifications by fields and sub-fields of reference vary significantly from one approach to another one. We ascertained that the data of some of these indicators are not available.

The databases have been selected according to their recognition at international level. Given their great number and the huge volume of reviews they comprise, we have selected for the current research 12 databases. These are the following: Elsevier, DOAJ, EBSCO, ProQuest, Thomson Reuters, CABI, CEEOL, SAGE, Science Direct, Springer, Emerlad Management, Oxford Journals.

The numerical information shows that the topic of sustainable development was tackled in more than half a million publications only in these databases. A selective presentation indicates the following figures: Elsevier - over 13,000 papers, DOAJ - over 14,000 papers, CEEOL - around 2,500 papers distributed in 20 sub-topics, SAGE - around 8,500 papers, Science Direct - over 78,000 papers, Springer - 2 software programmes, over 58,000 papers and books, 246 PhD theses, Emerlad Management - around 74,000 papers and 636 case studies. From an evolutionary point of view, it can be noticed that for example, only in Science Direct from 29,760 papers in 2009 a total of 31,821 was reached in 2010, respectively 82,205 in 2017, which shows a triple number of publications in the field.

Conclusions

We reinforce the idea that the concept of sustainable development remains provocative for the research area and necessary for socio-economic progress. At the same time, it remains an unclear and difficult concept in terms of its applicability.

Concretely, the literature indicates that for the moment is not known how to measure the level of sustainable development, as it is possible, for example, to measure the enterprise's profitability, the efficiency of an investment or the growth of an economy.

In compliance with most of the specialized works, the sustainable development issue is directly connected with the evolutionary challenge related to the major social and economic changes and the technological progress, especially in the past 25-30 years. The results of these changes are favorable for people and society, but in the same time unfavorable for the planet with all its resources. This dual situation determines the orientation towards a new development pattern, which now is considered the sustainable development.

According to the new state of world development, achieving a healthy level of economic growth imposes the improvement of social life conditions and the caring for the natural resources. Ensuring that a balance is preserved between the social and environmental factors will have beneficial effects on economic development. We advocate the idea that in an economy where the people does not benefit from balanced life conditions, while the environment is regarded only for exploitation, the economic development will be non-health, irrational or only on short term.

The paper highlights the fact that for over 25 years, the approach of sustainable development significantly remains at a theoretical level without identifying the practical relevance of the concept for the economic world. Thus, we are faced with the problem of the lack of valorisation of the efforts to improve the concept.

The paper intends to signal the need to accelerate the practical functionality of the concept and, by means of the foray in its evolution, it contributes to shaping new points of view and orientations regarding the viability of sustainable development.

The main arguments in favour of the above-mentioned contribution are: a certain threshold of sustainable development is not defined, there are still no tools that measure sustainable development, there are no specific indicators unanimously accepted. For these reasons, we believe that it is necessary to recognize the weaknesses of the approach of sustainable development and to accept the opinions according to which sustainable development proves to be utopic.

The alternative term that we propose to be used is ”sustenutopy” since it expresses the lack of practical consistence of the concept. Moreover, we think too much time has been wasted only on the purely theoretical approach of the concept which risks being a form without substance. We consider that a balanced socio-economic development, without a galloping rhythm associated with the hyper-consumerism and dissipation, is the practical solution for the sustainable development and this pays attention to management of resources

We also conclude that the orientation of sustainable development objectives in three different directions - economic, social and environmental - maintains and strengthens the difficulty to pass from theory to practice, because there is a conflict of interest between the three directions. Thus, the objectives of economic growth, which implies the continuous exploitation of resources, do not comply with the conservation of environmental factors, which involves their reduced use, most often. However, the identification of a compromise solution is not impossible, especially because could generate benefits for the world's population and for the human society as a whole. Maintaining the conflict of interest permit the ambiguity, that affects the meaning and the importance of the concept.

Although the theoretical aspects are essential to shape the practical approaches of a field of interest, the passing of too many years without a practical approach leads to the loss of the value of the concept. The theoretical approach of the sustainable development is prevalent in literature, while the practical approach exists only in the literature coming from some highly developed countries, where the entrepreneurial area proves to be interested for the concept implementation in its own activity.

Future Directions to Be Approached

The identification of sustainable development approaches in the literature has involved numerous and detailed research, but in an uncertain field, and a very high volume of work. The limits of the paper: utilization only the recognized databases, the reference to the authors only from some developed countries, the generalized grouping of the sub-domains of this concept etc. For these reasons, we propose to extend the future research to a deeper level, and we will focus more on the causes of discrepancies between theory and practice.

Bibliography

Albu, M. (2003), Managementul ecologic - parte integrantă a conceptului de dezvoltare durabilă: http://www.oeconomica.uab.ro/upload/lucrari/820063/23.pdf. [Accessed September 2nd 2017]

Alexander, P.C. (2013). Growth: a Discussion of the margins of economic and ecological thought. In Transgovernance. Advancing Sustainability Governance (ed. Meuleman, L.). E-book. Springer. pp. 83–161

Bartlett, A.A. (2006), Reflections on sustainability, population growth, and the environment, in Keiner, M. (eds.) - The Future of Sustainability. Springer, Dordrecht, pp. 17-37

Bashar, A. K. (2016), Criticism of sustainable development, [Accessed September 27th 2017] at: https://www.academia.edu/23021491/Criticism_of_Sustainable_Development_by_Abu_Khairul_Bashar

Bezgodov, A. (2015). Criticism of the concept of sustainable development, Planetary project. Saving humanity, http://planetaryproject.com/planet_project/critical/ [Accessed September 28th 2017]

Brown, L. (2009), Plan B4.0. Mobilizing to Save Civilization, Earth Policy Institute, W • W • Norton & Company.

Elkington, J. (1997), Cannibals with forks - Triple Bottom Line of 21st Century Business, Capstone Publishing Ltd. Oxford, UK.

Giovanetti, E. (2011), Debate on environmental economics and sustainable development, Personal communication in the framework of Eramus Programme - July 2011, University of Modena&Reggio Emilia.

Işan, V. (2009), Debate on the sustainable development, Oral communication as key speaker in the Conference: Dimensions of Sustainable Development in Romania, November 2009, "Al.I.Cuza" Univeristy of Iasi, Romania.

Jonas, J., Eriksson, S. (2007), Sustainable Business at Small and Medium-Sized Enterprises. The Case of Coffee Queen AB, Karlstads University, Department for Business Administration and Economics CTF, pp. 1-70.

Latouche, S. (1998). Il paradosso dell'economia ecologica e lo sviluppo sostenibile come ossimoro, Intervention at the International Study Seminar of Padova University, on 30th September 1998, http://www.edscuola.it/archivio/interlinea/paradosso.html [Accessed July 27th 2017]

Lélé, S.M. (1991), Sustainable development - a critical review, in World Development, Vol.19, no.6, pp. 607-621.

Mitlin, D. (1992), Sustainable Development: a guide to the literature, Environment and Urbanization, Vol.4, No.1, pp. 111-124

Pană, V., Pană, I. (2006), Dezvoltarea sustenabilă a întreprinderii - primul pas spre dezvoltarea durabilă, Annals of Oradea University, Economic Sciences Series, TOM XV/2006, vol.1, pp. 110-114.

Panwar, R., Rinne, T., Hansen, E., Juslin, H. (2006), Corporate Responsibility - Balancing Economic, Environmental and Social Issues in the Forest Products Industry, Forest Products Journal, Vol.56, No 2, pp. 4-12

Pascariu, G.C. (2017), Resilience - as an integrated approach of growth and sustainable development. Relevance and limits for EaP countries. Presentation at the International Conference "Competitiveness and Innovation in the Knowledge Economy", 22-23 September 2017, Chișinău, Republic of Moldova.

Redclift, M. (1987), Sustainable development. Exploring the contradictions, Routledge, Methuen, New York.

Singh, S.K. (2016), Sustainable development: a literature review, International Journal of Indian Psychology, Volume 3, Issue 3, No. 6, pp. 63-69

Soddy, F. M.A., F.R.S., (1933), Wealth, virtual wealth and debt. The solution of the economic paradox, 2nd Edition, London England Britons Publishing Company.

Tiezzi, E., Marchettini, N. (1999), Che cos'é lo svilippo sostenbile? Le basi scientifiche della sostenibilità e i guasti del pensiero unico. Donzelli Editore, Roma.

Zaman, Gh., Gherasim, Z. (2007), Criterii şi principii ale dezvoltării durabile din punctul de vedere al resurselor acesteia, in AGIR Bulletin, no.1/2007, pp. 136-142.

INTEGRATED FINANCING OF ENERGY FROM RENEWABLE SOURCES IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

Georgiana CHIŢIGA[122]

Abstract

Integrated financing of energy from renewable sources is an imperative in the EU, enrolling in the context of the necessity phasing out the use of the conventional fuels, promoting the development of electricity from renewable sources, to obtain the Member States' energy independence and bringing a significant contribution to the achievement a low-carbon economy. Having as a starting point the level relatively high of investment costs which are afferent to the energy production from renewable sources, all the European countries have set up the support schemes and cooperation mechanisms.The aim is to ensure support to the investors for green energy production, it has undergone to amendments and additions to achieve UE targets at minimal costs. The encouraging integrated financing of energy have been recognized worldwide, it is perceived as being essential in the future.

Keywords: renewable energy sources, integrated financing, support schemes, cooperation mechanisms, sustainable development.

JEL classification: Q42, Q56.

1.Introduction

Europe 2020 Strategy supports the objectives of the European economy with low CO2 emissions, one in which the energy obtained from renewable sources has a high share, requiring a transformation of the power system.

Integrated financing from the energy sector follows through the functioning of a power system that is competitive, durable and safe within the European energy market.

Even thought the competitive markets tend to lead to efficient results from the point of view of the production, resources and prices usage, in the case of market malfunction one can improve its efficient functioning by financing, and doing so, the joint aim and optimum results can be achieved.

The market malfunctions that obstruct an optimum functioning of a safe, durable, and accessible energy market must be identified. The malfunctions of the market may be an obstacle in achieving a good result and can lead to inadequate results.

Alongside allowing states' intervention under the circumstances of a market malfunction, there are other appropriate policies and measurements that could be established in order to correct the identified malfunctions, such as: sector regulation, mandatory standards of pollution, pricing mechanisms – the trading scheme of emissions at an EU level (EU ETS) and CO2 emission charges. Additional measurements, including State aids, can only aim the residual market malfunction, namely, the one that was not the object of a number of policies and measurements of such type. On condition that the aid neutralizes other policies that target the same market malfunction, the necessity of a State aid is not supported.

First of all, an analysis of the state aid must be made – the member state must prove its necessity in an efficient manner, and that other measurements were not taken, because state aids are not the only political instrument member states can use to ensure a functional, safe, durable, and affordable European energy market. One must take into account the existence of other, more proper, instruments used to achieve these aims.

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Regulation and market instruments are the most important means to achieve the environmental and energy aims.

The environment and energy aids can be granted under various forms. So, member states must highlight the reason for which other aiding forms, with a lower distortion potential (such as: repayable advances, compared to direct grants; tax credit, compared to tax reduction, the types of aids based on debt or capital instruments – for example, soft loans or subsided interest rate, state guarantees or other capital contributions on favorable terms), are less adequate.

The aid instrument must be chosen according to the markets malfunction that the aid measurement aims to remedy.

The aids granted to energy field can be considered compatible with the internal market only if they have an incentive effect, the help determining a change in beneficiaries behavior for a growth of environment protection level, or to improve the certain, affordable and durable functioning of the European energy market – an impossible situation if the aid would not have been granted. These aids must not subsidize the costs of an activity a company would normally withstand, nor compensate the commercial risk of the economic activity.

In principle, the incentive effect must be constant, with the help of a counterfactual analysis, comparing the levels of the target activity, obtained with and without state aid. Essentially, it means a checking of profitability without the aid, in order to determine if it is inferior to the profit the company may obtain without the offered help.

2.Integrated Financing of Energy from Renewable Sources

Important European investments are needed in order to achieve the goals of European energetic policy, and, as the EU strategy shows, priority should be given especially to investments in renewable energy sources.

The benefits resulting from an encouragement of renewable sources energy were globally acknowledged. Sector development in USA, China and other Asian countries show that this industry is perceived, worldwide, as being essential, in the future, for innovation, for energetic security, and for an important contribution to building a low carbon dioxide economy.

The challenge for the Europeans is to maintain the number one position in the industry and to ensure its development, in a time in which the governments must face the expenditure- reduction that the sector requires.

The development cost of the energy sector vary according to several factors including: the price of gas and oil, technology costs, transportation and network costs, technological progress, including administrative obstacles. Also, because the single European market is still fragmented, the infrastructure is “traditional”, and, on the other side, fossil fuels still benefit from subsidies for times larger, the price of renewable sources energy is often higher than that of traditional energy sources. Efforts must be made to insure the stimulation of the member states, in order to achieve the objectives related to renewable energy sources.

Until all the conditions will be fulfilled, and the obstacles reduced, the continuous support of energy from renewable sources will be needed. Thus, it is stressed that the financial support for renewable energy sources can be gradually eliminated, but only when the costs of the energy obtained from renewable sources will decrease some more, when the market’s deficiencies will be corrected, and when one can operate in a competitive market.

A. Support schemes

The selection and efficient coordination of the financial tools at a national and EU level is essential. Choosing a financial instrument to support the development of renewable energy sources depends on the degree of technological development and of the projects. Among the instruments there can be: grants, loans and loan guarantee, investment funds, fixed rate, bonuses, quota/certificate schemes, fiscal stimulus and auctions.

The instruments have a positive role, without affecting the competitiveness, under the right circumstances. They serve to a reduction of various risks: technologic-project risk, building risk, regulation risk, and they all depend on the degree of maturity of a project or technology. EU member states use a series of different tools to offer financial support. (table 1)

Table 1

Financing instruments used to obtain electricity by EU Member States 28

	Fixed tariff	Bonus	Quota obligations	Investment grants	Tax exemption	Tax incentive
Austria	x	-	-	-	-	-
Belgium	x	-	x	x	x	-
Bulgaria	x	-	-	-	-	x
Cyprus	x	-	-	-	-	-
Czech Republic	x	x	-	x	-	-
Croaţia	x	x	-	-	-	x
Germany	x		-	x	-	x
Danmark	-	x	-	-	-	-
Estonia	x	x	-	-	-	x
Spain	x	x	-	-	x	-
Finland	-	-	-	x	x	-
France	x	-	-	-	-	-
Greece	x	-	-	x	x	-
Hungary	x	-	-	x	-	-
Ireland	x	-	-	-	-	-
Italy	x	-	x	-	-	-
Lithuania	x	-	-	x	-	-
Luxemburg	x	-	-	x	-	-
Latvia	x	-	-	x	x	-
Malta	x	-	-	x	-	x
Holland	-	x	-	-	x	x
Poland	-	-	x	-	x	x
Portugal	x	-	-	-	-	-
Romania	-	-	x	-	-	-
Sweden	-	-	x	-	x	-
Slovenia	x	x	-	-	-	x
Slovakia	x	-	-	-	x	-
Great Britain	x	-	x	-	x	-

Source: The European Commission, 2015

According to the table, there can be highlighted the fact that using several instruments can be beneficial, as a result of the status of various technologies, from the point of view of their maturity, their users, and of the markets. However, the option of choosing an instrument or another must be clearly framed as to exclude uncertainty or negative consequences for the investors.

In all sectors, especially electricity one, there have been made significant reforms and instrument adjustment as a result of a change in requirements in recent years. As the production costs decreased, the taxes have been reduced; when technologies development they are included into the support schemes based on certificates or charges. When the technological risk decreases, the manufacturers are exposed to a higher risk related to the market price (and market inclusion), because the support changes for fix taxes to bonuses.

In some member states another reform element was the establishment of private financing mechanism that have the capacity to attract capital, and at the same time, increase the degree in which the renewable energy sources projects are accepted at a local scale, thus surpassing certain obstacles like construction permits. The instrument that is mostly used is the involvement of local responsibility, by which local communities can financially participate to the investment made to create the project, in exchange of a lower price of electricity or a cut of the profit coming out of the project. Also, creating public-private partnerships can be an efficient way of reducing the price of the project, achieving a higher acceptability, and at the same time contributing to the local and regional development, from a socio-economic point of view.

These reforms carry out their roles when planned and anticipated by the investors in accordance with a clear governmental strategy. Unplanned changes are a negative factor and compromise all investment strategies in renewable energy sources; they need to be removed, because they lower investors' trust and undermine the achievements of the objectives. The retroactive changes of the support schemes, in particular, must be removed, given the negative effect the changes produce on investors' trust.

Under present circumstances, there is a concern regarding the evolution in certain member states. A permanent monitoring will continue in order to see if additional measurements must be taken.

B. Cooperation mechanisms

Continuous changes improve the efficiency of the instruments, but still, the problem is not solved. The majority of the member states focused on national resources as to achieve the 2020 objectives on their own. There have not been identified any attempts to decrease costs through a development of cheaper resources. According to estimations, there is a chance to save up to 10 million Euros annually if the member states would perceive renewable sources energy as freight on a single European market, and not on national markets. The transition to integrated markets, especially their evolution to fixed premium is difficult, too fragmented and needs consolidation.

A larger convergence of national support schemes is required in order to ensure a pan-European approach of renewable energy sources development, for a competitive, sustainable, and safe energy. The necessity to adapt to a European market has appeared, especially in the electricity field, where a third of the energy will come from renewable sources.

A first step to integrate renewable energy sources is the development of new mechanism of cooperation. (table 2)

Through these cooperation mechanisms, member states can join forces with a view to develop renewable energy sources. So, when all the requirements of equal competition on the single energy market will be met, and the energy produces will have the possibility to fairly compete, all member states should be prepared to promote, in a pan-European approach, renewable energy sources that would be efficiently exploited throughout Europe.

Table 2

Cooperation mechanisms

Cooperation mechanisms	Advantages
Statistic transfers	A member state has a renewable source energy spare, it can statistically "sell" it to another member state, that has costly renewable energy sources. So, a member states wages and income that covers, at least, the price of power generation, and the other gains a contribution to its own goal, at a lower cost
Common projects	A new project about renewable energy sources of a member state can be co-financed by another member state, and the energy will be statistically divided between the two states. In this case, too, cooperation can lead to mutual advantages and cost savings. Common projects can also take place between a member states and a third country, if the electricity produced is imported by the EU (North Africa, for example)
Common support scheme	Two or several member states agree to fully or partially harmonize their support schemes of renewable energy sources development, in order to integrate the energy on the public market and to divide the production following the rule on the basis of the source of financial support, for example.

Source: data processed by author from the European Commission, the Directive concerning renewable energy sources

Utilizing these mechanisms would generate a European perspective, rather than a national one when comes to renewable energy sources, and by doing so, ensuring the efficient achievement of the goal Europe had on renewable energy sources. Thus, the commerce, joint projects and mutual support schemes represent just as many steps to integrate energy from renewable sources on the European market.

As a big advantage, we mention the fact that they allow the control of the way in which renewable energy sources are mutually developed and co-financed, as well as the way their support schemes unite and harmonize. Also, the mechanisms ease the support of more developed renewable energy sources from third parties. These mechanisms can facilitate a real progress regarding the convergence of the European support schemes, ensuring a better coherence with the single market.

Other initiatives could include a mutual approach concerning the differentiation between subsidies depending on the technology, annual data to be revised, methods/ clues of costs calculation, a more coherent fixed tax conversion into bonuses, as technologies mature and the ongoing activities target regional groups established for mutual support, such as the joint scheme for ecologic certificates (like in Norway and Sweden).

Future actions that would facilitate the exchange of information regarding current reforms taking place in the member states are expected, and they will help avoid a "subsidy race".

3. Conclusions

In the present integrated financing of energy from renewable sources is a major necessity, is a primordial need. We began, on the one hand, from the stringent need of an optimal resource usage and so reducing primary resources addiction, workplaces development – higher than exploitation industries and nonrenewable energies – as well as, environmental protection.

Positive results have been observed: the legislative changes. However, a series of aspects that need to be modified and improved has been observed: the negative impact on the environment determined by the incapacity of reducing primary resources, as well as the lack of progress in terms of jobs in the environment services sector.

Hereinafter, defining new ambitious objective is necessary; in order to contribute to the accomplishment of the objective of promoting and supporting the finanțarea energiei din surse regenerabile, efficient in terms of resource use and zero waste.

Achieving the objectives or close them will vary considerably from a member state to another, from one region to another; can be challenging tasks for many of the member states and local and regional authorities, especially for those experiencing difficulties.

The established targets must be correlated, so that they will not damage the environment and human health and ensure the possibility of a loyal competition with primary resources.

All these ensure a strongly support for the necessity to finanțarea energiei din surse regenerabile, being the key-element to achieve all the objectives on resource efficiency, ensuring that economy can grow and be less addicted to primary resources.

A present matter is the necessity to identify the domains in which the efforts should intensify until 2020 so that the production of energy from renewable sources in the European Union continue to grow until 2030 and after, mostly so that the technologies in the renewable energy system to become less costly, more competitive, and finally, market adapted – with support systems granted only for less developed technologies and to encourage investments in the renewable energy sector, by a gradual diminishing of subsidy granted to fossil fuel system, a functional carbon dioxide market, and well thought taxes applied to energy field.

From the year 2016 additional guidance has been provided when discussing support systems for renewable energy sources, as well as the way in which cooperation mechanisms should be used in order to achieve the aim of reducing costs for them. It was pointed out the necessity of a total subsidy review that member states are authorized to grant to the sector of renewable energy sources, in the favor of public offers, fixed bonuses, and obligations concerning the quota instead of commonly used flat rates.

Currently, EU introduced a comprehensive legislative framework, and has already started to prepare the period after 2020, with the purpose of an early clarification of the arrangements laid down for the investors after 2020, Renewable energy sources plays a key role in the European Commission's long term strategy, described in the notification 2050 Energy Perspective. The switch from politic concept to national implementation with tangible actions represents a challenge.

When all conditions of equal competition of a sole energy market will be gathered, and the energy producers could loyally compete, all member states should be better prepared to promote, in a pan-European manner, the energy from renewable souse, efficiently exploited by the whole EU. An analysis of the efficient finality of the EU energy projects must be made in order to facilitate the convergence of national support schemes, as to ensure the best conditions for renewable energy sources' development in Europe.

Bibliography

Bumbac, C. (2014) - Eficienţa energetică - componentă de bază a politicilor energetice actuale în condiţiile restrângerii disponibilului de resurse primare, studiu Institutul de Economie Mondială "Costin Murgescu".

Cazacu, M., Bădescu, V. (2012) - Surse noi de energie, Bucureşti, Editura Academiei Române, AGIR.

Chiş, C. M. (2017) - Un tomberon numit România, www.ziare.com.

Ciupagea, C., Câmpeanu, V. (2016) - Energia în Cursa Competitivitate – Încălzire Globală, Editura Expert, Bucureşti.

Deng, Y. Y., Haigh, M., Pouwels, W., Ramaekers, L., Brandsma, R., Schimschar, S., Grözinger, J. and de Jager, D. (2015) - Quantifying a realistic, worldwide wind and solar electricity supply, Global Environmental Change.

* * *, Bloomberg (2015) - Bloomberg New Energy Finance, (http://about.bnef.com.).

* * *, Critical Trends (2010-2017) - Global Change and Sustainable Development, UNDP, CSD, DSD.

* * *, EC (2016) - Progress reports - Member State progress reports, (https://ec.europa.eu/energy /en/topics/renewable-energy/progress-reports).

* * *, EEA (2015) - Trends and projections in Europe - Tracking progress towards Europe's climate and energy targets, EEA Report No 4/2015, European Environment Agency.

* * *, Eurostat (2016) - Short Assessment of Renewable Energy Sources, (http://ec.europa. eu/eurostat/web/energy/data/shares).

* * *, Worldbank (2015) - World development indicators (http://databank.worldbank.org).

* * *, http://www.energybulletin.net.

* * *, http://www.ipcc.ch.

* * *, http://www.awea.org/.

INVESTMENTS - DETERMINANT OF REGIONAL ECONOMIC GROWTH IN THE REPUBLIC OF MOLDOVA

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Abstract

The authors of this paper made a synthesis of the regional economics researchers' views on the determinants of economic growth. Thus, it was found that most opinions converge to the view that investments have a great impact on economic development. In order to verify the hypothesis about the influence of investments over the regional development, the authors analyzed the volume of investments in Republic of Moldova' s Regions for the period 2006-2016. The data of the National Bureau of Statistics of the Republic of Moldova were processed using such statistical instruments for determining the trend of evolution as: the absolute and relative deviation method from the base year and the previous year, the average annual growth / decrease rate; the least squares method for identifying the trend and the intensity of annual investments evolution and annual income for each region. We have presented our conclusions about necessity and possibilities to attract investments in regions.

Keywords: investment, regions, growth, trend, determinant

JEL classification: 018

Introduction

The economic development of the regions is the subject of many theoretical and analytical studies, from which it is concluded that the main aggregate for measuring regional economic growth is Gross Domestic Product. Unequal regional development began to be the subject of research after 1960, leading to the emergence of uneven developmental theories, for which some authors became Nobel laureates for economics, for example, Gunar Myrdal (Myrdal, 1957). Many researchers have highlighted the existence of a causal relationship between investment and economic growth. But most of the opinions converge to support the statement that the link between economic growth and investment developments is very tight. It is true that domestic and foreign investments have a significant impact on regional economic performance and competitiveness, being considered the engine of economic development.

Description of the Problem

Capital investment into higher-productivity fixed assets, innovative technologies, contributes to boosting the development of human capital, but also to improving many indicators of quality of life in the regions concerned: increasing employment, increasing wage income, improving regional infrastructure, etc. . Most empirical studies refer to foreign direct investments, which "are mentioned in the new growth theory as factors generating long-term economic growth. At the same time, attracted investments should be directed to those economic sectors that contribute to sustainable economic growth - agriculture, tourism, manufacturing - and not to speculative sectors such as real estate or retail. (Moraru, 2013).

The theoretical and empirical arguments on the interdependence between investment and economic growth lead us to the conclusion that deep studies are needed to develop policies and to identify real growth poles that will contribute to sustainable and competitive regional development. The basic indicator for analytical studies and regional economic development policy development is the Regional GDP (Gross Domestic Product), which, according to the economic content and the calculation method, is identical to the Gross Domestic Product (GDP) per country.

In the context of the changes that took place during the ratification of the Association Agreement with the EU, the Republic of Moldova has undertaken to align the statistics of the Republic of

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Moldova with the requirements of Eurostat. Among the priority directions of the Strategy for the Development of the National Statistical System 2016-2020, we find the introduction and calculation of the Gross Domestic Product (GDP) indicator, which represents the value of the goods and services provided by the entities resident in the given region.

The first calculations of this indicator for the period 2013-2014 in the Republic of Moldova were presented on October 19, 2016. Regional GDP is calculated in current and comparable prices for development regions: Center, North, South, Chisinau and ATU Gagauzia. The purpose of introducing this indicator in the "Regional Statistics" section of the Statistical Database was to provide decision-makers with indicators for developing strategies and directions for sustainable development of development regions, established by Law no. 438 of 28.12.2006 on regional development in the Republic of Moldova (Law, 2006).

The Regional GDP indicator helps to establish the level of economic development of the region, contributes to the objective determination of the role and place of the region in the country's economy and the objective and efficient evaluation of regional policy. This macroeconomic indicator was used by the Government of Moldova to develop and monitor the implementation of the National Strategy for Regional Development 2016-2020 (Strategy, 2016), an important document for planning the balanced and sustainable development of the regions in the Republic of Moldova.

At present, the Republic of Moldova comprises 6 development regions (DR), defined by Law no. 438 (Law, 2006) as "functional territorial units representing the framework for planning, evaluation and implementation of the regional development policy: North, Central, South, ATU Gagauzia, Chisinau, Transnistria, presented in table 1.

Table 1

Regional-territorial organization in the Republic of Moldova

Development regions	Regional-territorial Units	Average number of resident population, persons	
		2013	2014
North	Municipality Balti, districts: Briceni, Donduseni, Drochia, Edinet, Falesti, Floresti, Glodeni, Ocnita, Rascani, Sangerei, Soroca	997033	993047
Central	Districts: Anenii Noi, Calarasi, Criuleni, Dubasari, Hancești, Ialoveni, Nisporeni, Orhei, Rezina, Straseni, Soldanesti, Telenesti, Ungheni	1060582	1059542
South	Districts: Basarabeasca, Cahul, Cantemir, Causeni, Cimislia, Leova, Stefan Voda, Taraclia	536597	534967
ATU Gagauzia		161823	161829
Municipality Chisinau		802539	807020
Transnistria	Districts from the left side of the river Nistru and municipalities Tiraspol and Bender	n/d[125]	n/d

Sourse: Law, 2006

According to the number of population, there are 3 large regions (Center, North, Chisinau municipality), 2 regions with a population of about 500 thousand people (South and Transdniestria) and a very small region - ATU Gagauzia with a population of 162 thousand. Since 2006, the regional statistical data have been reported only with reference to 5 development regions, with no data from Transnistria. The first official data of the National Bureau of Statistics on regional GDP in current and comparable prices is for the the period of 2013-2014 (table 2).

[125] *Transnistria had 500 thousand inhabitants at the beginning of 2016, slightly less than in 2004 (580 thousand).*

Table 2

Regional GDP in current and comparable prices for 2013 and 2014, thousand lei

Development regions	Regional GDP in current prices, thousand lei				Regional GDP (2014) in comparable prices, thousand lei			
	value		per capita					
	2013	2014	2013	2014	value	%	per capita	%
Central	15 964 951	17 973 693	15,05	16,96	16 786 210	5,1	15,84	5,2
Chisinau city	56 038 053	62 869 976	69,83	77,90	59 315 504	5,8	73,50	5,3
North	18 381 911	20 519 025	18,44	20,66	19 175 471	4,3	19,31	4,7
South	9 001 710	9 704 175	16,78	18,14	9 032 470	0,3	16,88	0,6
ATU Gagauzia	2 834 781	3 064 634	17,52	18,94	2 863 660	1,0	17,70	1,0
SFIMI*	-1 710 935	-2 081 925			-1 845 732	7,9		
Whole country GDP	**100 510471**	**112 049 578**	**28,25**	**31,51**	**105 327 584**	**4,8**	**29,62**	**4,8**

**SFIMI – Services of financial intermediaries measured indirectly*
Sourse: www.statistica.md (last access 09.08.2017)

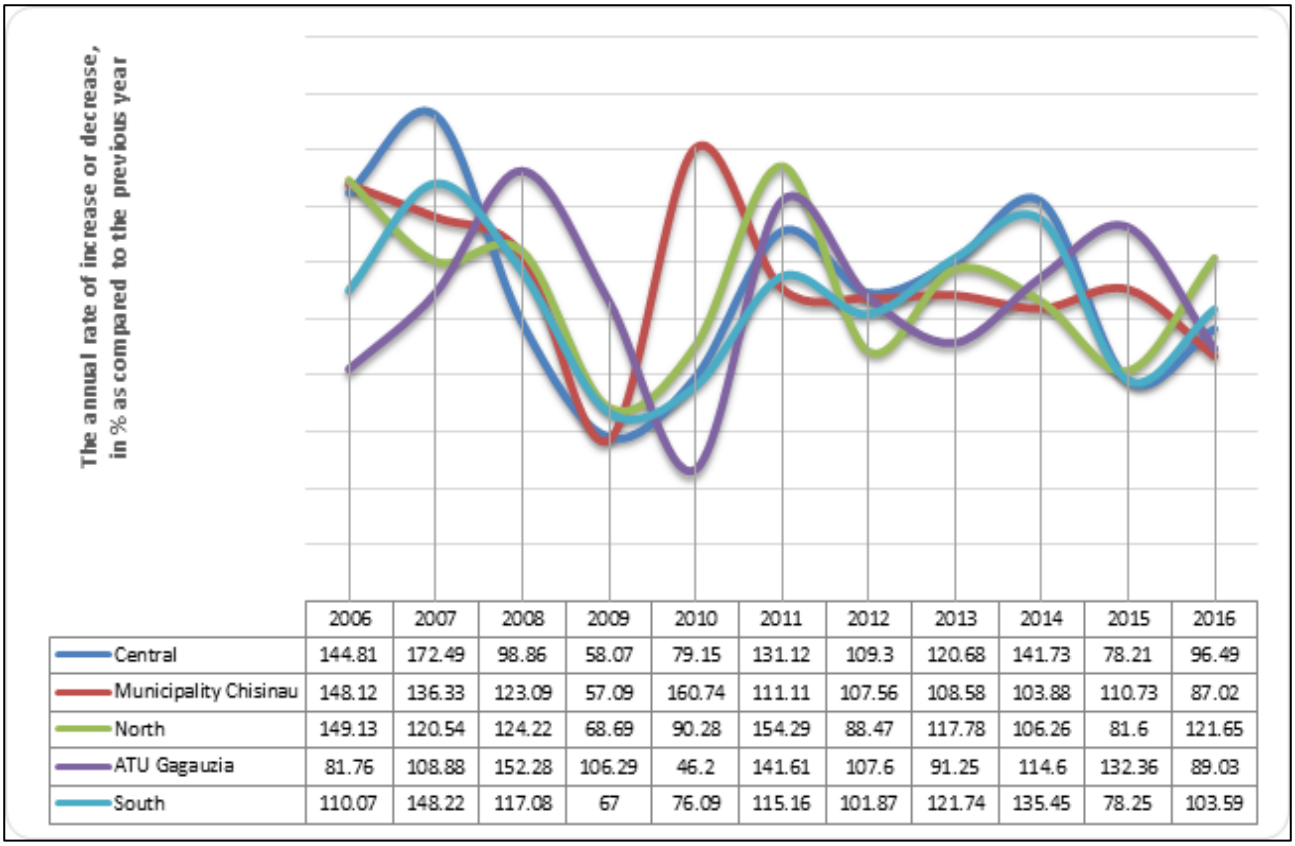
Table 2 clearly shows regional disparities in regional GDP evolution and size. The analysis of GDP growth rate and GDP per capita shows that in 2014 only in Chisinau and ATU Gagauzia the growth rate of GDP per capita is lower than the rate of increase of RGDP value, which is explained by population growth in these two regions. A reverse situation was recorded in the other 3 development regions. The highest growth rates were recorded in Chisinau, being the region with the highest GDP per capita, characterized by considerable commuting flows: many people travel from different regions every day to go at work, especially from RD Center. In fact, such a situation is also characteristic for many capital regions in the EU. According to EU data, capital regions generally have the highest average GDP per capita in most Member States. (Eurostat, 2016)

An important factor in boosting GDP growth is investment. In the regional aspect, the evolution of investments in the period 2006-2016, represented by the growth / decrease of the chain, is shown in Figure 1.

The data presented in the above figure clearly shows a cyclical evolution of the investment flow in the regions. With the exception of the RD ATU Gagauzia, the cycles of investment evolution coincide, although the growth / decrease indices are different. The calculations made by the authors on the relative changes in the value chain of investments in long-term assets for the period 2006 - 2016 show that the highest annual average growth is in the Chisinau capital region and represents around 10.4%. An average annual growth of 8.07% was achieved in RD North, followed by RD Center with an average increase of 7%. The South-East and the ATU Gagauzia have the slow growth rates of the value of investments in long-term assets, representing respectively 4% and 2%. These assertions allow us to conclude that a higher growth of investments is registered in the regions where the growth poles (Chisinau region) and Balti (North RD) are located.

Increasing the value of long-term investments in assets is a determinant of increasing labor productivity, which increases wage earnings. In the given context, the objective of this research is to verify the hypothesis regarding the dependence of earnings per capita income on the evolution of investments in long-term assets.

Figure 1 - Annual growth / decrease of investments in long-term material assets in development regions of the Republic of Moldova in 2006-2016, in % as compared to the previous year



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Central	144.81	172.49	98.86	58.07	79.15	131.12	109.3	120.68	141.73	78.21	96.49
Municipality Chisinau	148.12	136.33	123.09	57.09	160.74	111.11	107.56	108.58	103.88	110.73	87.02
North	149.13	120.54	124.22	68.69	90.28	154.29	88.47	117.78	106.26	81.6	121.65
ATU Gagauzia	81.76	108.88	152.28	106.29	46.2	141.61	107.6	91.25	114.6	132.36	89.03
South	110.07	148.22	117.08	67	76.09	115.16	101.87	121.74	135.45	78.25	103.59

Sourse: authors' calculations are in base of data from the National Bureau of Statistics

Methodology and Data Sources

In order to verify the dependence of earnings per capita income on the size of investments in long-term assets, data from the National Bureau of Statistics were analyzed for 4 development regions: North, Center, South and Chisinau. We considered investments in long-term assets (*I*) - independent variable, and income from salary activity per capita (*VSal/loc*) - the dependent variable. Period for which data are available on development regions: 2006-2016. Admitting the fact that these two variables are of a linear type:

$$\bar{y}_t = a + b \cdot x \quad (1),$$

the form of linear regression will have the following form:

$$VSal_{/loc} = a + b * I \quad (2)$$

The initial data for verifying the formulated hypothesis are presented in table 3.

In order to assess the intensity and character of the link between the dependent variable (income from salary activity per capita) noted through $VSal_{/loc}$ and the independent variable (investments), denoted by ***I***, the coefficients of peer correlation for each region for which data are available on the website of the National Bureau of Statistics. The measure of the intensity of the binding between the variables analyzed was performed with the *Pearson (R) correlation ratio*:

$$R = \sqrt{1 - \frac{\sum (y_i - y_x)^2}{\sum (y_i - \bar{y})^2}} \quad (3)$$

Table 3

Initial data for regression analysis

Region	Indicators	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Central	Investments in long term tangible assets, million lei	1632	2815	2783	1616	1279	1677	1833	2212	3135	2452	2366
	Salary income per capita, lei	245	283	350	347	374	458	433	512	518,3	575	587
Chisinau	Investments in long term tangible assets, million lei	6353	8661	.0661	6086	9783	.0870	.1692	.2695	.3188	.4603	.2707
	Salary income per capita, lei	727	891	1076	1146	1096	1321	1338	1433	1469	1595	1788
North	Investments in long term tangible assets, million lei	1894	2283	2836	1948	1759	2714	2401	2828	3005	2452	2983
	Salary income per capita, lei	212	277	342	353	375	455	450	464	518	578	573
South	Investments in long term tangible assets, million lei	873	1294	1515	1015	772,3	389,4	906	1103	1494	1169	1211
	Salary income per capita, lei	234	293	324	337	391	401	416	437	480	546	589

Sourse: Data bank of the National Bureau of Statistics of the Republic of Moldova.

Parameters of pare regression models for each of the four regions were estimated using the least squares method using the Regression application in Excel.

Results Obtained

The results obtained from the analysis performed in the Regression application, Pearson correlation values, estimated coefficient and estimated standard error are centralized in table 4 by development regions.

The value of the Pearson correlation ratio shows that between the per capita wage income and the long-term investment in assets is (0.827) only the Chisinau-capital region. A moderate relation (0.6337) between these two variables is attested in RD North. In RD Center and South East South, investments are not a determinant of rising wage incomes.

The coefficient of determination shows that the salary income per capita in Chisinau capital region is explained by 68.36% by the linear regression model, the remaining 31.64% being due to the random factors. In the other regions, the linear model does not explain the dependence of the wage income of the population in the respective regions on the evolution of investments. In this situation, the regional development in the Republic of Moldova is unbalanced, according to the theory of growth poles: in those regions where the Chisinau and Balti municipalities represent poles of growth, the economic growth is more pronounced.

Table 4

Results of regression calculation procedure

Development Region	Linear model $VSal_{/loc} = a + b * I$	Estimated parameters			
		Pearson (R) Correlation Ratio	Coefficient of Determination	Adjusted Coefficient of Determination	Standard Error of the Estimate
Chisinau	$VSal_{/loc} = 264{,}31 + 0{,}093 \cdot I$	0,8268	0,6836	0,6485	184,437
North	$VSal_{/loc} = 8{,}68 + 0{,}166 \cdot I$	0,6337	0,4016	0,3351	96,053
Central	$VSal_{/loc} = 306{,}92 + 0{,}055 \cdot I$	0,2855	0,0815	-0,0205	116,45
South	$VSal_{/loc} = 311{,}23 + 0{,}084 \cdot I$	0,19669	0,03868	-0,068	110,302

Source: Authors' calculations

Conclusions

The economic dimension of regional development is given by the macroeconomic indicator Regional Gross Domestic Product. The authors' analysis of this indicator indicates a marked disparity between the economic development of the regions in the Republic of Moldova. The existing disparities between Chisinau-Capital region and other development regions can be explained by the fact that most of the investments made by economic entities in long-term assets are replacing or maintaining existing ones in a functional state. Only a very small share is meant to expand, diversify and modernize the capacity of activity. At the same time, the flow of investments in the regions is unstable, indicating the need to revise the regional policy of attracting investments in the development regions of the Republic of Moldova with clear, sustainable objectives, investment opportunities and identified sources of financing.

Bibliography

Myrdal, G. (1957), Economic Theory and Under-Development Regions, London, Ducworth.

Moraru, C. (2013), Foreign direct investment and economic growth in Romania. Theoretical and Applied Economics. Volume XX (2013), No. 5(582), pp. 123-133 http://store.ectap.ro/articole/866_ro.pdf

* * *, (2016) Data bank of the National Bureau of Statistics of the Republic of Moldova, http://statbank.statistica.md/pxweb/pxweb/ro/60%20Statistica%20regionala/60%20Statistica%20regionala__17%20ICF/?rxid=9a62a0d7-86c4-45da-b7e4-fecc26003802

* * *, (2016) Eurostat, http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP_at_regional_level/ro

* * *, (2006) Law no. 438 of 28.12.2006 on regional development in the Republic of Moldova. In: Oficial Monitor Oficial No. 21-24 http://lex.justice.md/index.php?action=view&view=doc&id=320885

* * *, (2016), Law no. 239 on approval National Regional Development Strategy for 2016-2020. http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=368696 (accessed 25.08.2017)

THE EVOLUTION OF EXTERNAL ASSISTANCE IN THE REPUBLIC OF MOLDOVA IN 2016 AND RECOMMENDATIONS FOR IMPROVING THEIR COORDINATION MECHANISM

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Abstract

The Government of the Republic of Moldova has as a major priority the attraction of the external assistance from the development partners. In this sense, positive results were obtained in 2016 regarding the disbursements of the external assistance. The article deals with the main shortcomings identified in the coordination process of external assistance in the Republic of Moldova. Taking into account the assistance from the development partners, it is very important that Moldova has an efficient mechanism for programming, implementing, monitoring and assimilating external assistance. In this context, the authors come up with a set of short, medium and long term recommendations aimed at overcoming the existing deficiencies in the coordination of the external assistance.

Keywords: Republica Moldova**,** asistenţa externă, partenerii de dezvoltare.

JEL classification: F33, F53, G28

Introduction

The year 2016 was a productive one in the field of foreign assistance, with the joint efforts of the Moldovan Government (RM) and the development partners managing disbursements of external assistance amounting to more than 440 million euros, increasing by about 33% compared to 2015 and , practically at the level of 2014.

Ina Cretu, Counselor in Foreign Assistance Coordination at the State Chancellery, drafted the Report on Official Development Assistance to the Republic of Moldova in 2016, the basic findings of which were the basis for preparing the article.

The Content and Forms of Foreign Assistance in Republic of Moldova

Generally, 2016 was the year of regaining confidence and regaining credibility from development partners in our country, primarily due to the signing of the Agreement with the International Monetary Fund (IMF) on 7 November 2016.

This three-year RM agreement, funded by two loan instruments: The Enhanced Financing Facility (EFF) and the Extended Loan Facility (ECF), aims to support the country's economic and financial reform program. Thus, Moldova received access to a total amount of 129.4 million special drawing rights (about USD 178.7 million).

In 2016 Moldova's biggest development partner was the European Union. Other significant development partners after the volume of disbursements are: World Bank, Romania, European Bank for Reconstruction and Development (EBRD) and UN Agencies.

With regard to external assistance according to financing instruments, with a share of 78% in 2016, loans and loans prevailed.

The Main Beneficiaries

In the reference year, the following public authorities benefited from the largest number of projects: Academy of Sciences, Ministry of Health, Ministry of Economy, Ministry of Finance, etc. However,

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the largest budgets for external assistance were enjoyed by the Ministry of Transport and Road Infrastructure, the Ministry of Economy and the Ministry of Environment.

As a result of signing the IMF Agreement and ensuring macroeconomic stability in the RM, in December 2016 the European Commission unblocked disbursements for budget support and the total amount of tranches amounted to EUR 45.3 million.

An increase is also being made on 16 December 2016 by the World Bank of the $ 45 million Program of Operations for Development Policy in the Field of Competitiveness (so-called DPO-2).

In order to create a modern, professional, small but efficient public administration oriented towards the provision of quality public services, being one of the strategic priorities of the Moldovan Government, the Government negotiated with the Delegation of the European Union (EU) the Financing Agreement on the Support Program for public administration reform, amounting to EUR 15 million, signed in September 2016.

At the same time, the Government contributed significantly to the negotiations of three Financial Agreements under the European Neighborhood Instrument (for the Black Sea Basin Joint Operational Program 2014-2020, the Joint Operational Program Romania - Moldova 2014-2020 and the 2014-2020 Danube Transnational Program). The agreements concerned provide financial assistance in the form of a grant totaling over 143 million euros.

In 2016 of the Reimbursable Financial Assistance Agreement between Moldova and Romania in the amount of EUR 150 million, the first installment of EUR 60 million was disbursed to Moldova in August 2016.

In September 2016, two Development Assistance Agreements were signed between the Government of the US and the US Government to increase trade and investment in key sectors, as well as more efficient and responsible government governance, with a total of about 98.7 million US dollars.

In 2016, special attention was paid to establishing, together with development partners, the priorities of the Multi-Annual Strategic Framework for EU-2017-2020 programming and the United Nations Development Assistance Framework in RM 2018-2022.

The Main Problems in Attracting External Assistance

The main deficiencies identified by the authors in the process of coordination of the foreign assistance in the Republic of Moldova are the following:

1. The change in the information record system, implemented by the Ministry of Finance on 1 January 2016, has caused delays in capitalizing on the sources of external assistance projects.

2. Complex and lengthy procedures for obtaining EU-funded Twinning projects.

3. Long-term procedures in the case of the extension of external assistance programs / projects, in line with the legal framework in force with regard to the mechanism for the conclusion, application and termination of international treaties.

4. The use of parallel systems by technical assistance projects makes it difficult to monitor and evaluate them in line with national policies. This limits the predictability of external assistance in the sectoral annual planning process as well as the complementarity to exclude donor duplication.

5. A frequently encountered difficulty is that it is difficult to predict the number of international projects and their budget for the planned year when it comes to budgeting in June next year or the existence of calls for projects coming early next year. Thus, if a previously unplanned project is won, there are difficulties in accounting because it takes a rather long time to redesign budget to include the project in the Financial Plan -contributable in the year of management, and this leads to the non-utilization of the financial means in due time.

In our opinion, given the assistance of the development partners, it is very important that Moldova has an efficient mechanism for programming, implementing, monitoring and assimilating external assistance.

Proposals to Improve the Process of Co-ordination of External Assistance

The following is a set of recommendations, drafted by authors, to remedy the existing deficiencies in the coordination of foreign assistance in Moldova:

Short-term (2017)

1. Redesigning the coordination mechanism of external assistance by amending / completing the normative framework in the field;

2. Taking over the attributions from the ministries and strengthening the institutional capacities of the Ministry of Finance in the Republic of Moldova for the coordination of the external financial assistance, especially its planning.

3. Strengthen the institutional capacities of civil servants involved in the process of co-ordination of external assistance from public authorities, especially in the field of project management;

4. Ensure proper implementation of the Sectoral External Aid Coordination Mechanism by reanimating Sectoral Councils for External Assistance and Accountability of Sector Coordinators within Public Authorities;

5. Training and informing the staff of responsible departments within public authorities on how to operate the Aid Management Platform (AMP), but also to develop programming and monitoring skills for sectoral external assistance.

Medium term(2018-2019)

1. Strengthen and develop the Aid Management Platform (AMP) platform by dedicating the necessary administrative / financial resources for its proper functioning / maintenance.

2. Simplify financial procedures in the implementation of external assistance projects (opening accounts, reallocating finances, allocating IBANs for each category of expenditure, etc.).

3. Improving the national public budget planning framework to ensure the sustainability of external assistance projects by forecasting the necessary financial amounts in the state budget for sustainability / maintenance of projects;

4. Ensure adequate coordination with the Ministry of Finance of the programming of external funds in the budgeting process, including taking into account the Medium-Term Budgetary Framework;

Long-term

1. Creation of a Reserve Fund, besides the Ministry of Finance, for the co-financing of external assistance projects, in case of necessity / urgency.

2. Establishment of the External Assistance Coordination Agency / Office, based on international practices (especially CIS and Balkan countries).

Conclusions

Currently, the assistance provided by development partners to Moldova is a catalyst for the development of the national economy, an important source for the implementation of priority infrastructure projects, policy support in all areas in the context of alignment with the EU acquis and, not least, an opportunity to strengthen the institutional capacities of public authorities.

In the view of the authors, the implementation of the recommendations proposed in this article will enable the RM to ensure sustainable and efficient development of external assistance coordination with the support of development partners.

Bibliography

* * *, The data of the State Chancellery of the Republic of Moldova (www.amp.gov.md)

MONEY CREATION ISSUES

Sergiu GHERBOVEȚ [128], PhD(c)

Abstract

Money in the current system means debt. Consequently, the way, in the current system, that we have to have money is to borrow it. One of the ways that the economy was kept going was by providing cheap credits to people who couldn't really afford things anymore. Banks create new money whenever they extend credits. The amount of money they're creating out of nothing is just incredible. Of course, this newly created money is being distributed according to the priorities of the banking sector, not the priorities of society. There are two main issues with allowing banks to create money. Firstly, by creating money when they make loans, banks impose that a healthy growing economy has to exist, which is not always the case. The second big issue with allowing the banks to create money is their incentive to always create more. They create more money if they issue a loan. If you trust bankers to control the money supply, it will just continuously grow, as the level of debt will do, until the point when it crashes.

Keywords: banking, money creation, lending

JEL classification: E42, E44

Introduction

How is money created? For example today only small part of the total money supply was physical cash. The rest of the total money supply, commercial bank money is not physical cash, but this money exists. Imagine, if you create a 100 note you can ask your bank to put it into their ATM and the bank would have to repay it 100. There would be no interest charged on that money, but that money is then transferred to the Treasury. This is often used by governments as a form of fundraising. This form of making profit by issuing currency is called seigniorage. In fact, there is always a difference between the face value of notes and coins and their production costs. For instance, when the Central Bank creates a 100 note, it costs less to actually order to print that note. After this, it is sold to banks at face value. The difference between printing the note and actually selling it for 100 goes directly to the treasury. So, in effect all the profit obtained from creating physical money or bank notes goes to the Treasury and by the way it reduces the taxes people have to pay. This type of fundraising began in some countries after the Second World War. This was one contributing factor in the government's ability to finance post-war reconstruction. In some countries prior to 1844 bank notes were created by private banks and the government did not profit from their creation. In the 1840s there was no law to stop banks from creating their own bank notes. So they used to issue paper notes as kind of are presentative of what one has in the bank account. Instead of taking the heavy metal coins out of the bank and then go and pay somebody with them, one can get a paper and give it to somebody, who will use it to get the heavy metal coins from the bank.

Today, these paper notes became as good as money. People use paper notes instead of going and getting real money from the bank. Obviously, as soon as banks have realized the profit generated by these paper notes, it was interesting for them to create more. This is what happed until the 1840s. In the 1840s they pushed it just a little bit too far and that caused inflation, destabilizing the economy. Since then everything has gone digital and what we now use as money is the digital numbers.

Description of the Problem

Today most of the money in circulation is electronic money. Money held in bank accounts is called demand deposits. This is an accounting term the banks use when they create credits. Banks follow the same process when they create loans. All money held in bank accounts is an accounting entry. In fact, when banks issue loans to the public, they create new commercial bank money. When a

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customer repays a loan, commercial bank money is destroyed. The banks keep the interest as profit. Exist misconceptions about the way banks work. Some persons think that when you put your money into the bank it just stays there and it's safe. In the same way as a child who keep some money in a piggy bank and during a rainy day he smash it and take the money out to spend it. So a lot of people keep this idea of banking. The other people assume that there is a continuous moving of money. When you put your money in a bank, that money is then being moved across to somebody who wants to borrow it. But actually banks don't work like that. It's basically an accounting trick. Banks create money. They don't lend it. When a bank gives out what is called a loan, it basically pretends that you have deposited the money. It has to invent the liability. This is how the money supply is created. According to Paul Tucker - Deputy Governor of the Bank of England about 97 to 98% of money that's created is created as bank debt money. When banks make loans they create new money, they create additional deposits for those that have borrowed the money. Most economists don't have this full picture. They don't understand all the elements of the system. They rely on assumptions, on received knowledge without actually going into the details. As money is the center of the economy, if you don't understand where it comes from, who creates it and when it gets created then how can you understand the entire economy? Do not forget, the vast majority of money that we use now is not cash, but electronic money. Obviously creating electronic money is much more profitable than creating cash because it generate no production cost at all. Banks create new money whenever they extend credit, buy existing assets, or make payments on their own account, which mostly involves expanding their assets. When a bank buys securities, such as a Corporate or Government Bond it adds the bond to its assets and increases the company's bank deposits by the corresponding amount. New commercial bank money enters circulation when people spend the credit that has been granted to them by banks.

Most people have an idea of how money is. They are used to their own way of handling money and they try and implement their own idea of how their small household economy works into the national economy. And of course it just doesn't work out at all. One of the reasons of the difficulties we have to understand the banking system and credit creation is our background. When we leave school and get finally a job, we work really hard during the month and at the end of the month our company puts money on our bank account. So, logically, you work and as a result you get money. In reality you would never have got that job if credit hadn't been created in the first instance. It's a really important conceptual misunderstanding. Money doesn't come out only of economic activity. A lot of people do the mistake assuming that money comes only from an activity process (doing, making, growing or selling). The paradox is that if we don't want any debt then we will not have any money. Contrariwise, if we go into further debt, more money will enter the economy. All of this vicious circle will work until a boom, when people get over-indebted and can't re-pay their mortgage. That's what happened at the beginning in sub-prime America and caused, through (Allen F. and Gale D., 2000) contagion (Baur D. and Schulze D. 2002), (Bekaert G., Harvey C. and Ng A., 2005) effect a wave of defaults, a financial crisis. Banks become insolvent and stop lending. Situation changed dramatically from the period when banks were excessively lending, now they stop lending and that makes the recession even worse. Thru contagion (Glick R. and Rose A.K. 1999) people lose their jobs and then they become even more dependent on debt. It was needed to survive. So, it is important to know the source of contagion also (Van Rijikghem C.V., Weder B. 2001) and how banks works, normally, banks don't want to carry around huge quantities of cash money because it's dangerous, inconvenient and expensive.

Thus, what they do is paying each other in electronic money. As there are a limited number of banks in the system, the central reserve money can only be moved around them in a closed loop. The money is just circulating through this system over and over again and if you think about it, one coin could be used to make a billion of payments if it was circulated billion times. And that's effectively the system that you have now, is you have a small pool of real money that's just going round and round the system and it's being used to make a huge quantity of payments on our behalf. The Central Reserve Currency is what is referred to as the real money in the fractional reserve model.

Methodology

If you look over the history of money over at least the last 150 years, you will find at one moment the development of a gold standard that really comes to the fore in the 1880s/1890s. At that period, countries peg themselves a particular defined value of gold and then they have an agreement to fix/ to hold that value or to trade gold among themselves to make sure the balances are all at the determined point. Countries also could try to restrict or expand their own economies in order to make sure that the balance, that particular fixed price, is maintained.

This gold standard principle disintegrates after the First World War, when things broke. A major dislocation in the international monetary system occurs. With the Bretton Woods agreements at the end of the Second World War system changed. This time, everything was pegged to the dollar and the dollar itself was pegged to the gold.

So everything removed from gold backing or saying to paper money and the credit money that we are all using today. In 1944, at Bretton Woods, the US and the UK began to negotiate how to govern the world economy and the world monetary system and came up with the World Bank and the IMF and a series of other institutions designed to manage the global currency and there was still a gold standard, but this gold standard was going to be tied to the dollar. This system was designed to manage the imbalances, to avoid credit crunches, trade deficits or currency collapses. The currencies were managed and the system was stable, as long as the Americans played the role of oversight. And when the Americans were no longer respecting their role, the system ended. The quantity of money that was needed to pay for the Vietnam War and the Oil shocks determined the Americans to inflate the value of their own currency that ostensibly was meant to be tied, tied to gold and to every other currency. French president doubting about the honesty of President Nixon asked to take their gold back. Did they get their gold back? Go on, guess! This marked the Bretton Woods system end and the beginning of the modern era of the financial system. To resume, historically, money creation was pegged to a commodity, often gold, but today it is pegged to nothing. This means there is nothing backing our money?

Where does this leave us? If money is based on nothing, why do we think it has any value? Because we can still go and exchange it. It is noteworthy to indicate that the word “credit” comes from the Latin “credere”, which means belief. Since the collapse of the dollar gold standard in 1971 and the deregulation of the financial system, money creation has grown exponentially. The World Economic Forum meeting in Davos indicated a need for credit within the global economy to be expanded. They believe this credit expansion will create a boom because there will be more money in the economy with which to make investments. If you want a growing economy under the current set-up we have to have growing debt. One must keep in mind the effects of rapid credit expansion. One of them is inflation. Inflation is a rise in the general level of the prices of goods and services in an economy over a period of time. When the general price level rises each unit of currency buys fewer goods and services. As the money supply grows and there is more currency available, more money is available for investment which can lead to growth, but more money is also available for purchases of goods and speculation which leads to inflation.

Essentially, inflation is what happens when too much money is chasing too few goods and services, so there is too much money for the actual output of the economy. However in practice inflation is much more skewed and complicated. Measuring inflation is not a science and the way it is recorded poses a dilemma. However this measure is deemed to provide a consistently low figure for inflation. It is depend how to calculate inflation. Many western countries heavily subsidize agricultural production, which has the effect of keeping prices and inflation low. Increasing house prices, it may make you feel like you’re becoming wealthier, but as your wealth increases the effect is that your children’s wealth is actually decreasing. So in fact there is no net gain in wealth because your children are going to have to pay even more when they want to buy a house. So in effect there is no net increase. What is happening? So it’s another example in some countries of a very regressive policy to allow house prices to simply inflate. It makes everybody feel like things are going well and people spend money on other stuff, they take equity out of their houses but it’s not creating new jobs. It’s not enhancing the quality of the economy. It’s not helping balance of trade. It’s not helping the public deficit. In some countries 85.5% of consumer lending was secured as mortgages on dwellings. Thus, the only thing creating money was housing, then its prices increased. That’s why houses prices went up in the way they did. It was just a way to pump a lot of money into that market. That’s an increase in the amount of money in the

economy without a corresponding increase in activity in output, in GDP. It's non-GDP based spending. Thus, the main cause for the housing boom, in my opinion, is the huge amount of speculative credit created by the banks for housing. (Campbell J.Y. , 2014) Houses would be seen as places to live rather than as places to invest.

As more of the country's resources and industries are privatised the private sector takes on more debt. Some private equity companies have taken this theory to the extreme, engaging a practice known as a Leveraged Buy Out. It involves that a company is purchased at an often inflated price and the purchase price is transferred to the business as a debt. The company becomes responsible for the funding of its own purchase. These debts are often so great that the company needs to reduce staff, salaries and research activities. When you have to factor interest as a business, if you have to factor interest repayment into your goods and services, then you have to charge a perpetually higher price as you take on more and more debt. When the money supply increases more money is available for productive activities and consumption which is the condition for a boom. It's kind of the system that we're locked into, we can't grow the economy without growing the debt and the debt is the very thing that will bring down the economy.

One option is to reform the actual money system and to force banks to stop creating money as debt. By fixing the monetary system we can prevent the banks from causing another financial crisis and we can also make the current public service cuts and the tax rises and the increase in national debt unnecessary. The current monetary system allows the banking sector to extract wealth from the economy, whilst providing nothing productive in return. So a growing banking sector is not a good thing. If the banking sector is growing it's becoming less efficient and have a negative influence on the rest of the economy. If we want to have a chance of tackling big social issues, we have to figure out the money issue. Obviously, the state monopoly on bank currency that we nowadays have is very good thing from some point of view. It's very easy to trade internationally with it. It helps big businesses, it cuts down their transaction costs but it's not so good for independent businesses and it's not so good for localities. So if we have a money system where the rules value community and connection between people within communities over time you build up a better and more wealthy basis for a diverse local economy.

A bank run can take three forms: customers can withdraw their money in cash. However this will not reduce the digital money supply. It will only merely transfer ownership. They can shift their money from large institutions to smaller more ethical banks such as credit unions, mutual banks or independent building societies. Shifting commercial bank money to these institutions will reduce the monopolistic grip of the big banks. The third kind of bank run is the international one. When money is withdrawn internationally from one currency to another the reserve currency shifts from the national bank of one country to the reserve account of the foreign bank. Foreign banks have relationships with local banks that allow them to hold foreign reserve currencies whilst not being a part of the central bank scheme at the local central bank. What happens when currencies and the exchange rate system is no longer managed? Which are some of the first consequences? Devaluations. Speculation. Imbalances. The reserve currency needs to be spent in the country of origin or exchanged into other currencies. Most foreign banks do not have deposit taking accounts outside of their national borders and as such the foreign reserves they hold do not come back to them as deposits. A balance of trade is basically the difference between what you're selling abroad and what you're buying from abroad. Foreign exchange reserves cannot be directly used for domestic spending. The money can only be spent abroad or on imports. A country with a large balance of trade deficit relies on its creditors to spend the imbalances accrued in its own market.

Obviously all of us trade currency fairly regularly. If you go abroad you exchange it into another currency. That's a form of currency trading. That happens fairly regularly and that's a conventional part of the trading process. Large corporations have to do this on a regular basis. It becomes something that people question and consider a speculation, when you get people realising that currencies move around. There's always an opportunity to try and make money out of those exchanges in value and therefore you can speculate on it. That's the more questionable end of the market, that's the bit of the market that things like a financial transactions tax will try and chop away at. The wrong assumption that this process just produces instability for everyone else is still present. People involved in want volatility in the market, because that's how they make their money. They want to encourage it and they do encourage it by trading and speculating in the way they do. Volatility or variance what are used for ? Some for making forecasting or structural

analysis etc. Another ones are looking at volatility as opportunity. By 2010 the exchange market had grown to the largest and most liquid market in the world. Volatility became a need (Wu Y., 1997). What could small developing countries do in case of huge and instantly fluctuating financial flows? What do they have to do to cope? Increase their production and sell more by lowering the prices. This international system seems peculiar. Almost everything depends on simply sentiments and beliefs about what an economy is like, rather than it depends on what a economy represents itself. Consequently, everything can shift very rapidly. If that belief changes it can change very fast the financial market. The process of financial contagion (Dornbusch R., Park Y.C. and Claessens S., 2000) can take place in just minutes or seconds. You can just move from being an apparently quite stable robust economy to a less promising one. Just because sentiments has turned against you, you can find that markets are picking on you.

Much of the changes in the way that the global economy works over the last thirty years have resulted from debt. It's a direct form of power that's being used over poorest countries to force them to do what are really in the interests of the richest segments of the world. As a result of that corporations become enormous and made huge amounts of profit. The financial sector has become even bigger. The real money to be made in the world today is not by producing anything at all its purely by forms of speculating. Making money from money - that's the most profitable and by far the biggest form of economic activity that exists in the world today. To protect themselves, vulnerable countries need to accrue currency from rich countries.

What we've seen since the 1970s is a dramatic increase in a series of phenomena that have had a simulative effect on the changes in the financial system. To compensate the lack of a defined commodity based value underlying currencies, financial institutions developed securitisation as a tool to manage risk.

Until the 1960s, the Securities and Exchange Commission would be quite clear that derivatives that weren't based on real products, like agricultural products, weren't allowed to be traded. That changes in the sixties. Everyone can trade currency futures, things that are not based on real products, but based on the movement of currency prices, being traded at a moment in the future. Once you have the system of fixed exchange rates breaking down obviously this accelerates enormously. This implies the rollback of government regulation here and the theory is that the market is better at regulating itself, than when a government is interfering all the time.

In the last decade we had a mathematical - financial innovation, derivatives, CDO, CDS (credit default swap). Everybody is suddenly sitting there saying that these CDO's, in fact, don't provide the kind of stability previously thought and one of the big problems was too much reliance on mathematical science applied to economy. As example CDO as the most famous model for pricing structured credit securities is the Gausian copula model. A common fallacy is that the marginal distribution and correlation matrix are sufficient for describing the joint distribution of multivariate distribution. But correlation only measures linear dependence. If we simulate points from the bivariate normal and Meta-Gumbel distribution, bivariate distribution have standard normal marginal distribution, and in each case the correlation is the same, but Meta – Gumbel distribution is much more likely to anticipate large joint moves. The complete nonsense it turns out is that there's far more risk attached to trying to securitise risk and securitise debt in the way that was done. The attempt to get more and more complex ways of regulating and shaping a financial market and trying to make a quick buck out of it, helped produce the opposite effect and led to a spectacular crash. What we saw as a result of this situation was that one sector grew above all, the financial sector.

Often the authorities are guilty for this kind of situations. Economists consider that, on one hand, the FED's mistake produced the great depression and could even rule the crisis 2007-2010, on another hand some economist argue that not only authorities but world class economist are involved in crisis, as in the 1997-1998 financial crisis (caused by the Long Term Capital Management - LTCM), a hedge fund that appeared in 1994 and whose near-bankruptcy in 1998 put the international banking system at a major risk and created major disruptions in the financial markets. LTCM enjoyed from an impeccable reputation and boasted two Nobel Laureates on staff: Robert Merton and Myron Scholes. Some economists consider that their theory, called "new method to determine the value of derivatives", caused the crisis.

At the beginning, LTCM invested in risk arbitrage strategies and was well known for its acumen in this area. The company was also known for receiving favourable terms from lenders and trading

partners based primarily on its sterling reputation. In the early 1997, the US dollar had risen by roughly 50%, due to the so-called Reverse Plaza Accord. The rising dollar weakened Asian economies. Many countries (Thailand, Indonesia, Philippines, Korea, Russia, Brazil, etc.) had substantial amounts of US dollar–denominated debt. Thus, the rising US dollar presented these countries with a stark choice—either devalue their home currency to re-establish an attractive price on the foreign exchange market or live with the higher currency, be forced to repay much greater amounts of foreign-denominated debt, and live with a longer, more severe recession. In July 1997, Thailand succumbed first, breaking the peg on the Thai baht. One by one in rapid succession, other countries with similar financial profiles (Indonesia, South Korea, Malaysia, the Philippines, etc.) also experienced a currency crisis. As a consequence, a much larger flight to liquidity occurred than LTCM had anticipated when constructing their portfolio. Their positions designed to profit from convergence to fair value incurred large losses. As LTCM teetered, Wall Street feared that Long-Term's failure could cause a chain reaction in numerous markets, causing catastrophic losses throughout the financial system. Seeing no options left, the Federal Reserve Bank of New York organized a bailout to avoid a wider collapse in the financial markets.

The lessons that should be learned from these are: banks should have been broken in smaller units, derivatives should have been banned, as in the case of LTCM almost the opposite was done, allowing derivatives and leverage. The investment policy has to be based on ratings. It is impossible to make a financial product without resorting to a rating agency. Rating agencies, or credit rating agencies, evaluate the creditworthiness of organisations that issue debt in public markets. Rating agencies assign a letter grade to each bond, which represents an opinion as to the likelihood that the organisation will be able to repay both the principal and interest as they become due.

The problem is that conflicts of interest exist and if someone needs to get the highest rating he will get it by paying the rating agencies. Consequently, the rating, which is like a mark at school, will not be as objective as expected, because no longer based on fairness. The methodology of the ratings agencies is not without flaws, and they are under considerable scrutiny regarding the inaccuracy of many ratings categories during the financial crisis. In this state of art, a lot of people criticize rating agencies because organisations are not always equal in front of them, but no one has made a better alternative. During each crisis there are pressures on rating agencies.

Results Obtained

May be we need a new kind of currency that is backed by something like energy or renewable energy, for example, a kilowatt hour backed currency would be very interesting. We need to start valuing things that are most scarce and that we need to survive as a human race in the long run. Backing an international currency with something like that will generate enormous investment in, for example, renewable energy, if that’s the primary international unit of account that is being used.

May be another option is a basket of currencies, thus you mix up the value of different currencies to create a very solid currency that people have confidence in. What does a progressive financial system look like? Control over how money is created and what it’s used for is a democratic issue. You currently have the profit seeking banking sector- not accountable to anybody other than themselves -who are creating new spending power and deciding where in the economy that goes.

Monetary reformers believe that that entire money supply should be for the benefit of the public and should never be created by a private organisation as debt. Democratising the money supply - what that means is putting the power to issue and allocate money back into hands of people and taking it away from private organisations, institutions that don’t actually represent the people, that aren’t democratically accountable to the people. The banks aren’t democratically accountable to the people, they’re accountable to their shareholders and their shareholders only. Now they’re underwritten by us by the taxpayer but they’re not accountable to us. That doesn’t make any sense at all. So, if you democratise the monetary system, you are subjecting it to the same kinds of discipline as the education system, as the health service and other key publicly needed services. There is no reason that money should be viewed as any different. It is a fundamentally important service that everybody needs. I can’t survive without enough money, nobody can. May we do need a different system.

Conclusions

A lot of models (Kodres L.E. and Pritsker M. , 2002) doesn't make any sense either from an orthodox free market perspective because these banks are monopolists - effectively they monopolise credit creation so they don't obey the rules of any free market discipline. Yet at the same time, they are not producing socially or environmentally beneficial outcomes along any real scale.

The power to create money is so powerful. You've got to be very concerned about who has that power. If it's somebody who's going to benefit from creating the money then they're going to have the incentive to create more than the economy actually needs. The same would probably happen if you give that power to politicians. You know you can't trust the politicians to be trying to please voters and to have power over creating money at the same time. It's a real conflict of interest. The only thing you really can do is to give it to somebody who has no conflict of interest - an independent, transparent, accountable body. Money could be allocated according to the needs and desires of the population. Systems could be put in place to allow for direct democratic allocation of funds either wholly or partially. A framework and rules could be established to incorporate up to date economic theory into how much money should be created and for what types of purposes. The Government would no longer be able to get access to large sums of money to pursue armed conflict if this was not sanctioned by the populace. We would be able to see exactly what they're doing with the power to create money. We would be able to see how much they're creating and where that money is going. And that is pretty much the only way we can get control over the power to create money and stop it being abused.

Future Directions to Be Approached

May be person to person banking has been around for a while. It's essentially the eBay of banking, so it allows borrowers and lenders to be put together in a marketplace. Default rates at the largest peer to peer lender. Risk is minimised by pooling funds so that each investor's contribution to a specific loan remains minimal. There's a site which is about currency exchange, so again, by passing the kind of mainstream banking or currency exchange system and just doing it person to person. A lot of the interesting stuff that's going to happen around currencies and around money more generally is to do with the impact of the internet.

My gut feeling is that we will see more and more of those types of systems. We will also see more and more applications and things using our phones than we would ever have imagined and I think we're only just at the beginning of that. The issue of monetary reform has historically been a very sensitive issue because of the incredible power, wealth and privileges it bestows. In an age where analytic thought and a scientific approach are held in such high esteem there is no justifiable argument for keeping the mechanics and implications of the monetary process such a taboo subject. As democratic citizens we have the right to demand a monetary system which is both stable and beneficial to society. The banking lobby is very powerful. I suspect that they won't be in favour of these kinds of models although ultimately one could argue that it's a much more stable footing for banks.

Analyses show that a shift in monetary system occurs. The classical system have been used until 1920, the Gold standard until 1940, Bretton woods ended in the 70's and after this the US dollar system begins. Nowadays, some countries start to abandon US dollar. Should we imagine that a new monetary system will be used in the future?

Bibliography

Allen, F. and Gale, D. (2000) “Financial Contagion”, Journal of Political Economy 108, 1- 33.

Baur, D. and Schulze, D. (2002) “Coexceedances in Financial Markets – A Quantile Regression Analysis of Contagion”, University of Tuebingen

Bekaert G., Harvey C. and Ng A. (2005) “Market integration and contagion”, Journal of Business, 78, pp.39-70

Campbell, J.Y. (2014) Empirical Asset Pricing: Eugene Fama, Lars Peter Hansen, and Robert Shiller, Scandinavian Journal of Economic, vol. 116, iss. 3, pp. 593-634.

Dornbusch, R., Park, Y.C. and Claessens, S. (2000) “Contagion: Understanding How it Spreads”, The World Bank Research Observer 15, 177-197

Glick, R. and Rose, A.K. (1999) “Contagion and Trade: Why are Currency Crises Regional?”, Journal of International Money and Finance 18, 603-617

Kodres, L.E. and Pritsker, M. (2002) “A Rational Expectations Model of Financial Contagion”, Journal of Finance 57, 768-799.

Van Rijikghem, C.V. şi Weder, B. 2001. “Sources of Contagion: Is it Finance or Trade?”, Journal of International Economics 54, 293-300

Wu, Y. (1997) Rational bubbles in the stock market: accounting for the U.S. stock price volatility. Economic Inquiry 35: 309–319.

FINANCIAL IMPACT OF THE BIOINTELLIPRO LLC SOLUTION

Kai DUH[129], [130], PhD,
Martin LO[131], PhD,

Abstract

Biointellipro LLC provides the technical know-hows and strategic solutions to the complex and increasingly challenging food and agriculture system

Financial Impact of the Biointellipro LLC Solution represent the innovation financial technology for the local people and for pure people in the world.

Keywords: financial impact, biointellipro solution

JEL classification: M11, Q01, Q16

How will Biointellipro Help You?

Biointellipro LLC provides the technical know-hows and strategic solutions to the complex and increasingly challenging food and agriculture system.

Today, one can no longer expect to sustain agriculture operations without being environmentally responsible, while threats on food safety and security continue to be a focal point internationally. Our goal is to promote social and societal entrepreneurship that produces safe and high quality food and agriculture products using environmentally sustainable approaches.

About Dr. Y. Martin Lo, CEO & President of Biointellipro LLC, decided to step aside from his 20 years of academic career to focus on his belief of applying “adequate and affordable” technologies to help those in need. He is a strong believer of “when it comes to science, one has to be humble,” which leads to his vision of being the frontline person to “observe and learn” in order to understand what the real needs are. He has been instrumental in organizing interdisciplinary teams to strategize effective approaches so the resources could be best utilized. Dr. Lo is a well-published food bioprocess engineer with renowned research programs in value-added bioconversion of food and agriculture byproducts as well as development of food safety strategies. His technical expertise include intervention strategies for microbial control in food processing facilities, post-harvest preservation technologies, recovery of renewable ingredients to add value to agriculture products and byproducts, reduction of trans fatty acids in food, creation of nutritionally balanced products for humanitarian purposes, assessment of nano-safety in food, and fermentation optimization. He continues to serve as the Editor-in-Chief for two important journals in the field, namely the Journal of Food Processing & Preservation and Food Science & Nutrition.

Dr. Lo currently serves as the first Ambassador for the International Union of Food Science and Technology (IUFoST) and received from White House the US Presidential Volunteer Service Award in 2012. As a FDA-recognized Process Authority, Dr. Lo reviews and certifies scheduled process for food companies to meet FDA/USDA regulations on high risk acidified and low-acid canned foods. Dr. Lo constantly hosts training courses, including Better Process Control School (BPCS), Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Points (HACCP), and Implementation of Safe Quality Food (SQF). He assists Maryland Department of Health and Mental Hygiene (DHMH) in assessing processing protocols and has helped Mid-Atlantic regional food companies and the farming communities develop new quality products. He served as the President of the Chinese American Food Society and the Chair of Food Engineering Division in the Institute of Food Technologists (IFT), and was selected twice as a Distinguished Lecturer for IFT. Dr. Lo continues to serve on the international training team for Commercially Sterile Packaged Foods (CSPF) and Good Agriculture Practices (GAPs). He has conducted a spectrum of workshops in developing countries, including CSPF (Morocco and China), Food Safety

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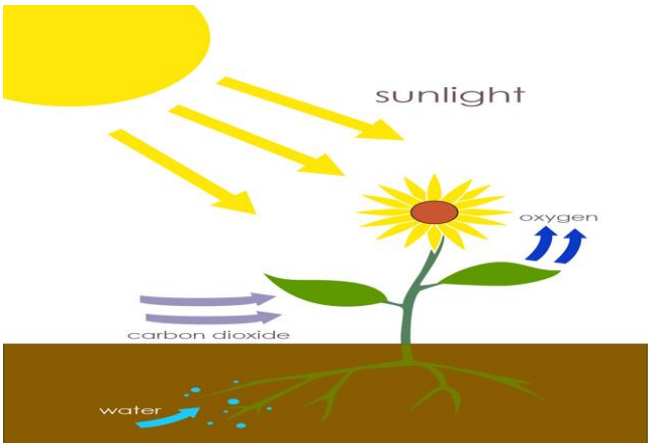
Risk Minimization (Nigeria), Food Quality Lab and Nutrition Labeling (El Salvador), US Food Safety Modernization Act (China), and GMP & HACCP (Bangladesh).bout Dr. Martin Lo, Founder & CEO.

What Do Roots Do for a Plant?

The most common three answers are:

- Bring water from the ground to the plant;
- Bring nutrients from the ground to the plant;
- Keep the plant from toppling over.

Figure 1 - Understanding photosynthesis



Source: personal contribution

What Makes a Weed?

Percentage of carbon energy fixed into the root system:

- Weed: 20%
- Grasses: 60%
- Vegetables: up to 75%
- Shrubs and trees: 80%

What is the Energy in the Roots Used for?

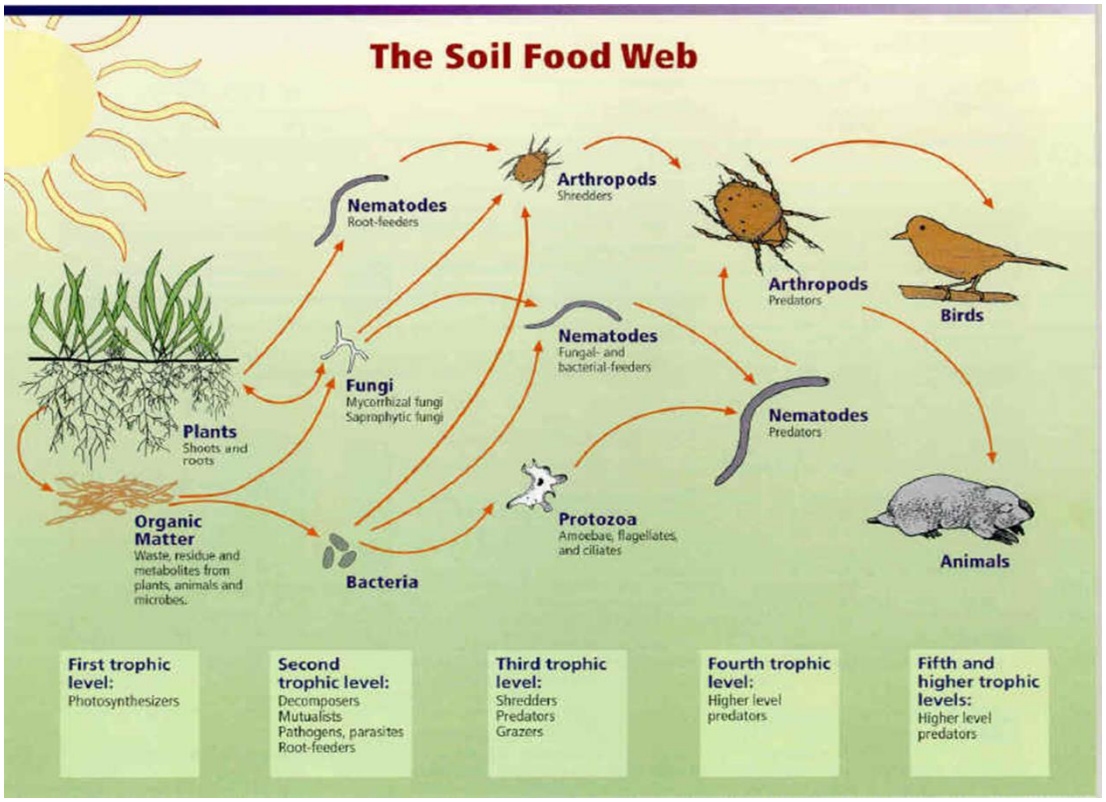
- 50% of the carbon energy is used to build structural roots for plant stability.
- take up diffused nutrients though lateral roots.
- 50% is expelled from the roots as exudates.

What are Exudates?

Exudates are simple sugars, proteins and carbohydrates… FOODS that are released from every surface of the plant (bark, stem, leaves, roots, etc.)

The vast majority of exudates are released in the rhizosphere (root sphere or root zone).

Figure 2 - Why would plants waste food/energy into the soil?



Bacterial dominant

Fungal dominant

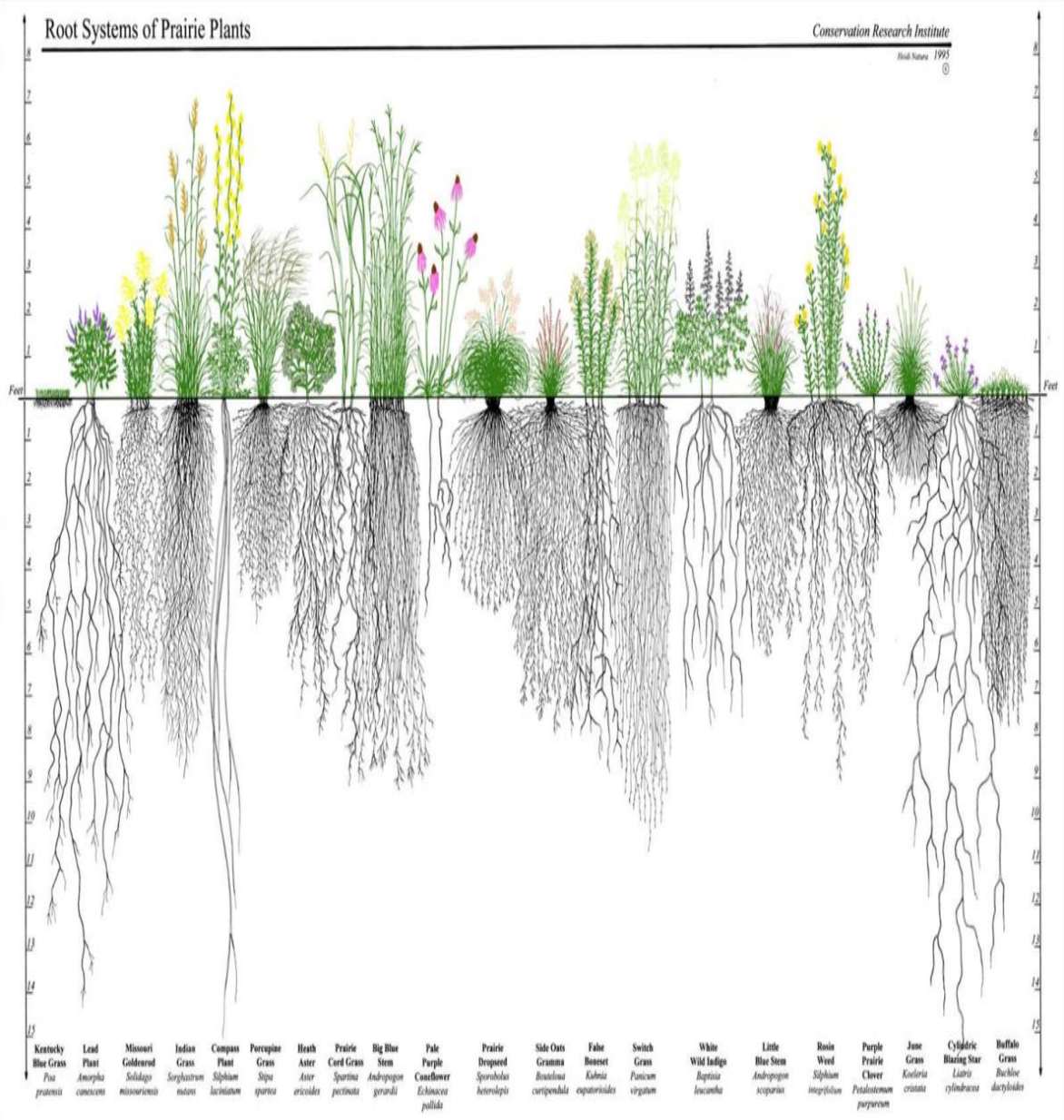
Source: Dr. Elaine Ingham (Soil Food Web Inc.)

	Weeds	Vegies	Row Crops	Trees
Bacteria:	1000	500	300	300
Fungi:	300	300	300	1000

Soil Compaction v Root Strength:

- <150 psi roots have no problem;
- 150-300 psi weeds and taproots;
- 300-600 taproots only;
- 600< NOTHING can grow.

Figure 3 - How deep can roots go?

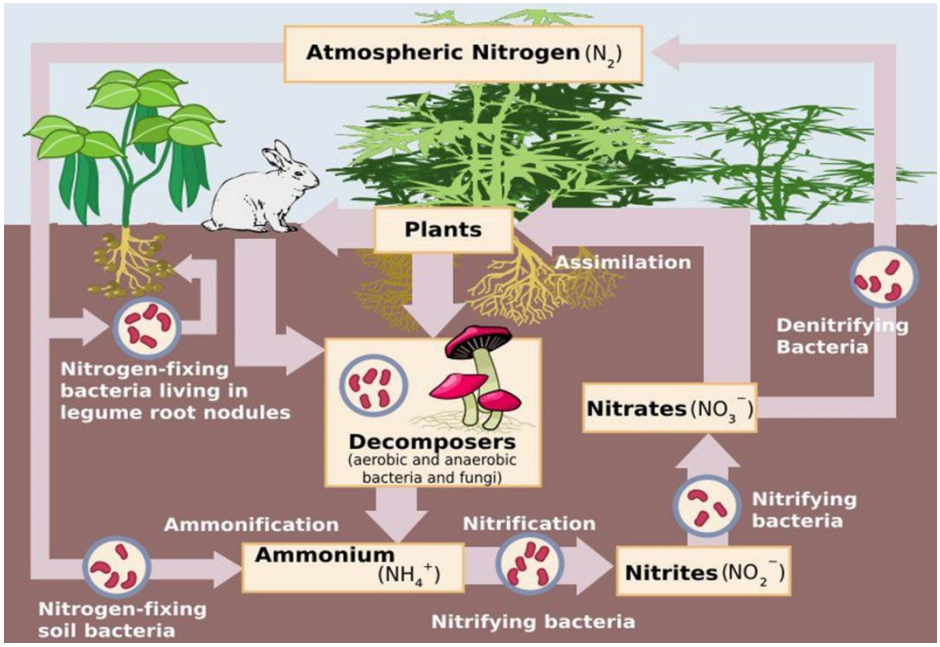


Source: personal contribution

What is the result of compaction:

- Roots can't penetrate;
- Microbes don't get fed;
- Water and oxygen can't penetrate (anaerobic);
- Ground can become water logged or erode at the point of compaction.

Figure 4 - What is the result of compaction



Source: personal contribution

Figure 5 - Innovation technology for the individual family

Source: CanYALove.org

Figure 6 - Evolution of the innovation technology for the individual family

Source: CanYALove.org

Figure 7 - Results of the innovation technology for the individual family

Source: CanYALove.org

Financial Impact of the Biointellipro LLC Solution represent the innovation financial technology for the local people and for pure people in the world.

THE PROBLEM OF BANKING SECTOR VULNERABILITY ASSESSMENT IN THE CONTEXT OF SECURING FINANCIAL STABILITY IN THE REPUBLIC OF MOLDOVA

Vadim LOPOTENCO[132], PhD(c)

Abstract

Experience shows that the initial financial system vulnerabilities appear and develop, usually on financial institutions. Financial institutions, especially banks are in close interdependence, so if problems arise in one institution, them blazing forth refer to other parts of the system. In this article we will analyze the influence of low capitalization of financial institutions on their ability to absorb shocks. Also, we will analyze if several institutions will be affected simultaneously because they are exposed to similar risks, such the three commercial banks in the Republic of Moldova, that was involving in the removal from the banking system of imposing amounts, so-called "theft of the century". We will show that the vulnerability of the banking sector is a key factor in increasing financial stability.

Keywords: vulnerability, banking sector, financial stability

JEL classification: E58, G21, G32

1. Introduction

Experience shows that the initial financial system vulnerabilities appear and develop, usually on financial institutions. Financial institutions, especially banks are in close interdependence, so if problems arise in one institution, them blazing forth refer to other parts of the system.

Overall, the financial risks related to credit process, market, liquidity, interest rate and foreign currency position. Thus, business strategies, that involving concentration of exposures make financial institutions become susceptible to adverse developments in specific industries or sectors. In general, low capitalization of financial institutions reduces the ability to absorb shocks, which happened in the banking sector.

There are also cases where several institutions are affected simultaneously because they are exposed to similar risks, such the three commercial banks in the Republic of Moldova, that was involving in the removal from the banking system of imposing amounts, so-called "theft of the century".

The Republic of Moldova, as a developing country, has an underdeveloped financial sector, which is represented mostly by commercial banks. The degree of financial intermediation in our country is quite high, taking into consideration that the population falls annually. Thus the vulnerability of the banking sector is a key factor in increasing financial stability.

Vulnerability assessment is important to improve the influence of the factors threatening the financial stability and provides necessary information for policy making authorities.

2. What is Financial Vulnerability?

Banking vulnerability analysis was a problem to the attention of scientists. After Ben Bernanke (1983) The USA Banking system has always been created by small banks, independent and particularly vulnerable (Bernanke, 1983). Christensen, Kumar and Zorn (2015) defines vulnerability as a condition of existence, which can amplify and transmit shocks to the financial system.

According to the IMF, a financial sector can be considered vulnerable to a crisis, when it can not absorb shock (IMF Working Paper, 2000). These shocks can be linked to imbalances in the price and liquidity, asset quality and the macroeconomic environment.

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Hypothesis 1: The financial system is more vulnerable, with that much the financial crisis will be larger.

The assessment problem of financial sector vulnerability is two-dimensional being researched at regional and global level, however, to explain its essence can draw a parallel with the story of English folklore "Three Little Pigs". The financial system can be viewed as a house and the wolf as a shock. So if the house is made of straw, the shock will break down quickly, so if this is from twigs, but the pigs will be eaten by the wolf. But if the house is from brick, it will be more resistant and the pig will be safe. So to get the financial stability is necessary to strengthen the financial system's ability to absorb shocks, considerably reducing vulnerability.

The vulnerability is composed of two parts - susceptibility and resistance. Susceptibility is composed of factors operating in a community and enabling a hazard to produce an emergency. The resistance is the ability to cope with damages caused.

3. Identifying and Assessing of the Vulnerability in Current Conditions

Hypothesis 2. Vulnerability is a quantitative and qualitative dimension

Detection (identification) of the financial sector vulnerability is based on examination of a set of factors, including the complexity of risk management systems, the development of markets, the limits imposed by regulatory authorities. The vulnerability of the financial sector is influenced by:

a. Interconnections in the domestic financial sector
b. External exposures
c. The complexity of business models

Christensen, Kumar and Zorn (2015) proposed the vulnerability assessment of the financial sector depending on:

- The leverage,
- Credit and liquidity problem,
- Establishing of the risks,
- Transparency.

This Assessment is done in four areas of the financial sector: entities of the financial sector, shadow banking, asset markets and the non-financial sector.

The countries of Southeast Europe, including Republic of Moldova, have economies in developing, so evaluation model presented above is not actual. This is because the financial sector is weak and depends largely on the banking sector, but the shadow banking sector, as well as market assets practically doesn't exist. Thus to assess financial sector requires an adjustment of quantitative indicators.

Table 1

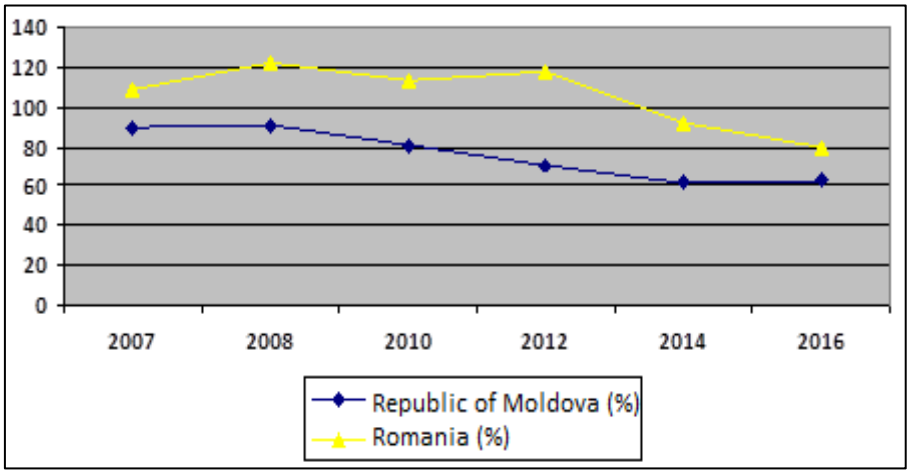
Quantitative indicators for assessing the vulnerability of the banking sector in Southeast Europe

Sector	The leverage	Credit and liquidity problem	Establishing of the risks	Transparency
Entities of the financial sector	- leverage ratio - standards of indebtedness	- liquidity standards - loans to deposits ratio	- rates of return - approval of standards	- the risk analysis
Non-financial sector	- debt to income ratio - costs of servicing debt	- Cash and liquid active possessions	-	- influence of large companies

Source: Christensen, Kumar and Zorn (2015)

The global crisis has demonstrated that commercial banks need stable sources of funding to meet market changes. An important source of attracted resources are deposits, so the coverage ratio of deposits to loans present a particular interest (figure 1).

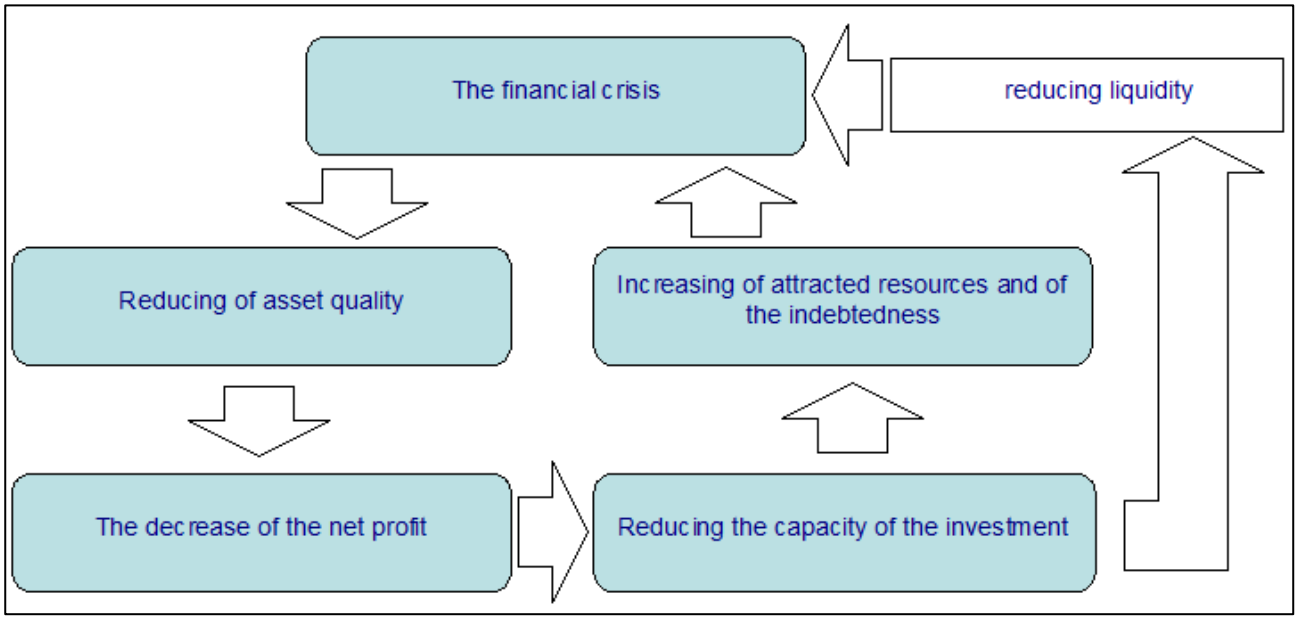
Figure 1 - The evolution of the loans rate in deposits during 2007 -2016 in the Republic of Moldova and Romania



Source: Created by author based on NBM and NBR data

After analyzing the figure is noted that during the crisis the commercial banks were using at maximum level the attracted resources in the form of bank deposits. This demonstrates that banks were thinly capitalized. The problem of banks capitalization can be viewed in Figure 2.

Figure 2 - Financial consequences of shock transmission


The financial crisis
reducing liquidity
Reducing of asset quality
Increasing of attracted resources and of the indebtedness
The decrease of the net profit
Reducing the capacity of the investment

Source: Created by author

In this context we can say that a weak capitalization of commercial banks will have a negative impact on financial stability. In case of a shock, this will reduce the bank's ability to profitably invest attracted resources. So, to deal with financial market imbalances, the bank must have enough capital to invest profitable it and overcome the crisis. This issue will be reviewed based on the situation in the Republic Moldova.

4. Early Warning Signals of Financial Sector Vulnerability

Hypothesis 3: Vulnerability is not an event, but a process

Financial Sector Assessment is carried out not only by examining quantitative, but also qualitative factors. Qualitative factors can not be measured in absolute terms, but have an essential influence on financial stability. This problem is topical for all countries of Southeast Europe, where is developed corruption, money laundering and non transparency decisions taking.

Thus we infer a set of early signs of the financial sector increased vulnerability. This quantitative signals includes:

- Worsening of the asset quality;
- Essential reduction in dynamic of the attracted resources
- Increased of the indebtedness;
- Worsening of the liquidity level;
- Major movements of the capital.

Also it is necessary to emphasize and quality signals:

- Reducing of the prudential supervision by authorities;
- Frequent changes in legal norms, neglecting continuity;
- Weak development from the authorities of the monetary policy transmission mechanism to the real economy
- The low level of independence and transparency of the state institutions;
- Difficulties in identifying of the financial and banking organizations decision persons.

These signals allow us to deduce a highly vulnerable financial sector. In these circumstances it is necessary to enhance system immunity for the financial stability.

Case Study. Financial system stability in the Republic of Moldova

The banking system of the Republic of Moldova is unstable. This instability is conditioned by financial market situation in the country. Strengthening of the banking system can be achieved by implementing several solutions, namely, stimulating processes of banks reorganization and to decrease influence of the state in banking sector, especially in the situation of political instability.

Just consider a current problem of the banking sector in Republic of Moldova is the discrepancy of banks assets volume. For example, if we compare the value of assets of banks in the top 3 with the small one, then there is a difference of 38 times. This is worrying for the banking sector because the resisting force of the small banks is reduced to a market shocks, and the consequences can be destructive for the system.

Similarly banks merge processes could boost the development of the banking sector because this would create healthy competition in the banking market, if will exist banks with a similar level of capital. So we can not talk about active competition between banks, which do not involve a development of the banking sector as a whole.

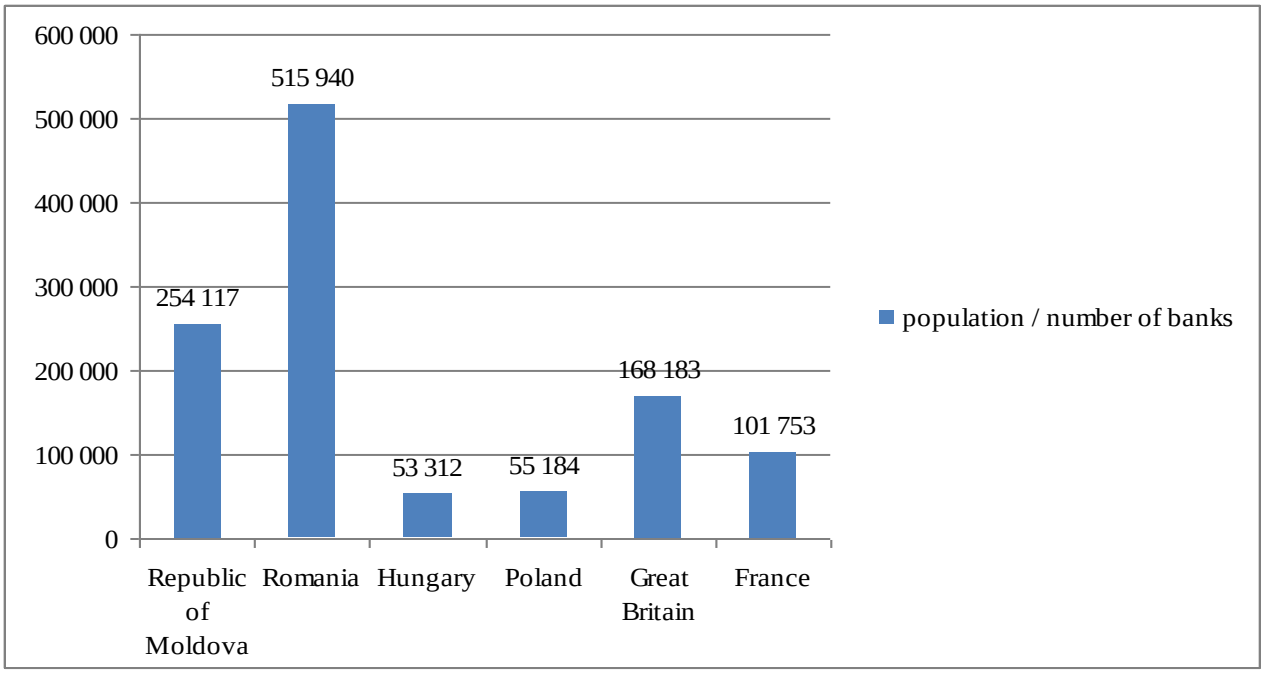
Thus we consider opportune to reduce the number of banks in the Republic of Moldova by fusion, thus commercial banks will be capitalized, so will be more resistant on the market and will have a greater competitive power and financial sector stability in the country would increase. In this context we consider necessary to analyze the ratio of banks per capita in other countries, including countries with a developed economy. This can be seen in Figure 3.

Looking at Figure 3 it can be seen that European countries have a higher bank concentration. Thus in France each bank are reported 101 753 residents, but in Hungary a lower number, ie 53 312 residents per bank. The Republic of Moldova is a result of 254 117 residents in a commercial bank. At the same time, it should be noted that this number includes credit institutions that do not have the status of universal commercial bank in the Occident, but in the Republic of Moldova all commercial banks hold such status.

We consider that it does not give solidarity for the banking sector stability and requires a reduced flexibility of the financial sector in the Republic of Moldova. Thus, the economic model of our country is very different to a developed countries one, especially regarding the development of Small and Medium Enterprises ('SME) and small entrepreneurs. Thus, in developed countries, SME's can be funded quickly account the credit institutions operating locally knowledgeable in their work and local market conjuncture. So it gets a mutual relationship of credible cooperation.

In this way the financial sector in the Republic of Moldova is subject to several risks of instability. It should be noted that the number of banks in Europe is in decreasing.

Figure 3 - The ratio of banks per capita



Source: Prepared by the author based on ECB reports

During 2014 and early 2015, the Republic of Moldova banking system has been disrupted by a series of historic proportions bank fraud, which not only risks to undermining economic prospects, but also the European integration of the country. In October, three banks (Banca de Economii S.A. - BEM, JSCB Banca Sociala - BS and JSCB Unibank- UB), representing over one third of the country entire banking system have remained without activity license and The National Bank of Moldova (NBM) established special supervision of other 3 banks - JSCB Moldova Agroindbank, JSCB Moldindconbank and JSCB VictoriaBank. The plight of the three failed banks was caused by a series of frauds aimed ultimately with de-capitalization of banks by lending in large proportions, with the involvement of offshore companies, local companies, foreign banks and the probably with the support of state institutions representatives.

Given that about 12% of GDP disappear from the banking system, and three banks whose assets amount to about 35% of the entire banking system assets, the risks for the macroeconomic situation and the entire country of the state are obvious.

It is also obvious that the crisis in the banking system is far from being overcome. The Republic of Moldova faces a multitude of economic and geopolitical vulnerabilities that undermines the economic security of the state. A major risk related to rise the sovereign risk, with the possible transformation of state guarantees used for emergency loans to three banks. The volume of guarantees is impressive compared with the Republic of Moldova economy size (about 9% of GDP and 34% of budget revenues). Therefore, the share of debt in GDP will increase from 32% in 2014 to 48% in 2015 and 51% in 2016. On the background of the budget deficit, current account deficit, the low level of official reserve assets and currency risk, increasing indebtedness fueling country risk. This will generate an essential fiscal shock for about 10 years. However, reducing of the foreign exchange reserves has exhausted NBM ability to mitigate any further pressure on the national currency, which feeds risk currency depreciation and respectively additional inflationary risks.

5. Conclusions and Recommendations

Hypothesis 4: The vulnerability can not be excluded, can only be increased the immunity of the financial system

In a globalized and increasingly complex financial environment, assessing and promoting of the financial stability requires close cooperation - nationally and internationally - between different

supervisors ministries and government agencies, central banks, regulators and supervisors. They, also, imply maintaining of a direct dialogue with the financial community actors.

An instability of the banking sector or a shock can cause serious distortions in the allocation of scarce resources, which is the capital, disrupted signal constellation which operators base their decisions: artificial prices, erroneous evaluation of profitability, deformed divisions of risk, insufficient or excessive risk premiums, etc. The problem is that these difficulties list always remains open and they are not easy to diagnose.

The problem of banking sector vulnerability assessment of the states in Southeast Europe, including the Republic of Moldova is that the qualitative factors prevail quantitative.

To reduce the influence of qualitative factors is strictly necessary to improve the quantitative indicators. This can be achieved by:

- Attracting of foreign investment in banks, so capitalization of banks will be held;

- Forced transition to Basel III standards;

- Periodic assessment of financial sector based on a set of quantitative indicators adjusted to international standards.

Similarly it is necessary to achieve greater transparency of the commercial banks shareholding to determine the beneficial owner. At the same time we need presentation of the laws relating to the financial sector for public consultation.

These measures will help to reduce the problem of vulnerability assessment in the context of maintaining financial stability.

Bibliography

Bernanke, B.S. (1983). “Nonmonetary Effects of the Financial in Propagation of the Great Depression”, American Economic Review

Christensen, I., Kumar, G., Zom, L. (2015). “Assessing Vulnerabilities in the Canadian Financial System”, Bank of Canada, June 2015.

Cooper, George. (2008). “The Origin of Financial Crises, Central Banks, Credit Bubbles and the Efficient Market Fallacy”, Vintage Books, New York 2008;

Diamond, D.W., Dybvig P.H. (1983). “Bank Runs, Deposit Insurance, and Liquidity” In: Journal of Political Economy. Vol. 91 (June). p.401-419;

Elsinger, H., Lehar, A., Summer, M. (2002). "Risk Assessment for Banking Systems," Working Papers 79, Oesterreichische Nationalbank (Austrian Central Bank);

Fisher, I. (1933). “The Debt-Deflation Theory of Great Depression” In: Econometrica, Vol. 1 (October). P. 337-357;

Johnston, R.B., Chai, J., Schumacher, L. (2000). “Assessing Financial System Vulnerabilities”, IMF Working Paper, April 2000.

Mody, Ashoka, Wolff, Guntram B. (2015). “The vulnerability of Europe’s small and medium-sized banks”, Bruegel Working Paper 2015/07.

Schinasi, Garry J.. (2005). “Preserving Financial Stability”, International Monetary Fund, ISBN 1-58906-356-2 ISSN 1020-5098 Published September 2005;

Sheldon, George; Maurer Martin (1998). “Interbank Lending and Systemic Risk: An Empirical Analysis for Switzerland” In: Swiss Journal of Economics and Statistics (SJES), 1998, vol. 134, issue IV, p. 685-704;

Turner, P., Sobrun, J. (2015) “Bond markets and monetary policy dilemmas for the emerging markets”, Working Papers No 508

DO ETHICAL APPROACHES IN WESTERN – CHINA ECONOMIC DIPLOMACY MAKE SENSE?

Issues on the agenda up to the first decade of the 21st century

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Abstract

The interconnection of economic productivity, social security, domestic and international investment capabilities and, last but not least, military expenditure capabilities, move the discussion about pathways in Western – Chinese relations to the field of ethics, and ultimately to political philosophy. This article holds that no political analysis regarding the robustness of Western (EU and USA) policy towards China will be complete as long as it does not include an ethics and values – based perspective. Here, specific European countries can supply the needed resources.
Ethical aspects in the West´s relationship with China cannot be ignored. On the contrary, the emergence of a new international economic and financial system will be deeply influenced by the observance or by ignorance about ethical and moral values. They are applicable first at national level – especially in social security and environment protection – then in bilateral and in multilateral partnerships and ultimately at global level.

Keywords: economic diplomacy, international relations

JEL classification: F53, F63

Executive Summary

By analysing the agendas of the meetings and negotiations between the West and China, US-China and EU-China of the last 30-40 years, we conclude that the majority of issues therein deal with economics. Only the smaller part deals with political and cultural affairs. We will look at how each of these three countries, respectively region relate to each other and what type of broad foreign policy they pursue in economic and political issues toward the other. The question to ask here is to what extent economic affairs convey ethical values from one actor to the other.

Economic relations within the EU – USA – China trilateral are considerably influencing the development of the rest of the world, both economically and politically. This is such not only because these countries´ cumulated populations of ca. 2.25 bn. make up approximately a third of the Earth´s total population, but especially because their cumulated GDP amounts to ca. US$ 37,250 bn. which is ca. 60 percent of the total world GDP in 2010 (ca. $63,000 bn.[135])

Chinese economic growth process after 1978, its impressive investment in industrial fixed assets ever since, including in complete turn – key factories imported from industrialized Western countries, combined with the West´s systemic debt problems and with the outsourcing habits towards East – Asia, are the major reasons for the rise of China to one of the biggest actors in global economic policy by the onset of the second decade of the 21st century.

We believe there are three significant factors which underlie motivations of the trilateral parties (USA, EU and China) when relating to each other with regard to economic relations and diplomacy:

First, it is **China´s economic progress**. By 2010, despite the global economic recession, the economic imbalance of power between the three parties, has changed to the benefit of China: China became the world's second largest national economy after the USA with respect to overall GDP figures, overtaking Japan and each EU member country (even though not the EU as a whole, which remains the largest single market on Earth with the biggest nominal GDP). The enviable Chinese economic dynamism, its not so enviable lack of social security and the recent Western

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[135] *The figure is expressed by applying exchange rate values. See IMF, World Economic Outlook April 2011, Table A1 „Summary of World Output" for 2010, http://www.imf.org/external/pubs/ft/weo/2011/01/pdf/tables.pdf.*

relative economic decline have changed the equation about the relations between the three parties into the situation we have now. It is in this context that the Chinese pursue uninterruptedly their drive to develop and return to the position of a respected and powerful civilization their country had until the mid 17th century.

Second, **the West´s (EU and USA) continuing drive for its own development** ever since it took leadership around the mid-15th century over (the originally Christian) Europe by taking over this role from **Byzantium**, is a strong motivator for the pursuit of those Western foreign policy interests which reflect themselves into international economic relations. One of its latest steps in this process was its struggle to defeat Communism and the Soviet Union. For this, it pursued among others policies, also the policy of **containment** towards the Soviet Union. Therefore, ever since the West recognized the People´s Republic of China as **de iure** inheritor of pre – 1949 China (instead of Taiwan), it tried to play the Soviet Union off against China and vice-versa, by using economic leverage. It also applied a policy of growth and productivity increase by spending systematically in deficit and by outsourcing parts of its own high-cost manufacturing operations to labour-cheap China. Thus, it contributed not only to keeping its US own production costs low, thus appearing more competitive than countries of the Soviet camp, but it also helped China create an own industrial technological base. Furthermore, it indirectly helped China pile up in the last thirty years, those thousands of billions of US dollars in monetary and financial reserves which it disposes of now. Further, under US leadership, in this process the West allowed itself, especially after 1990 (when it saw itself to have remained the sole superpower "alive"), to accumulate increasingly unsustainable structural and systemic financial deficits. This **mismanaged course and** (from the point of view of economic doctrines, but probably not from the point of view of own political interests) **error** created a situation which, in combination with the West's current demographic problems, undermines the sustainable character of Western economic competitiveness. It will hinder its ability to export not only its products, but especially its political philosophy, democracy, human rights, free-marketeerism and Christianity-based values too.

Third, **the Treaty of Lisbon** on European Union provides a new legal framework for the EU. This makes it institutionally easier for the EU to position itself in foreign policy and economic relations as a more outstanding actor by speaking with a single voice on the global stage and for being more flexible in joining the USA in common positions. Thus, the "**soft power**" of the EU might be able to draw the attention of Beijing not only to the importance of economic issues for national development (as it has been doing ever since it recognized the People´s Republic of China in 1978 as its main partner in Chinese issues), but to ethical and environmental aspects (including human rights and social security) too.

Why would we need to include **ethical reflections** when we speak about the West´s relationship with China? Well, simple: while keeping in mind the factors above the answer is clear: we realize that the West´s vitality will largely depend on its ability to return to those ethical roots and political philosophy which created its, up to now, economic success and brought it into its current global leadership position.

The ethical values we mean here are **voluntarism**, a minimum dose of **idealism** of its entrepreneurs, willingness toward **self-sacrifice** by politicians and by **rendering service** to their compatriots and the public space by business community without the pursuit of immediate monetary profits.

Ultimately, these ethical values are deductible from those established values of Hellenism, Judeo-Christianity, bourgeois revolution, industrialization and digitalization which made the West into a global leader.

A. Dynamic Reciprocal Positioning in the Economic Diplomacy within the Trilateral USA – EU – CHINA

We will look at how each of these three countries, respectively region relate to each other and what type of broad foreign policy they pursue in economic and political issues toward the other.

By analysing the agendas of the meetings and negotiations between the West and China, US-China and EU-China of the last 30-40 years, we conclude that the majority of issues deal with

economics. Only the smaller part deals with political and cultural affairs. The question to ask here is to what extent economic affairs convey ethical values from one actor to the other.

With respect to economic interests, these three actors, had and have at least one common interest: to keep as stable and predictable as possible the international economic and financial system, simply in order to be able trade. This is the broadest frame (Leitplanke) within which the policies and quests for satisfying own interests are defined and practised.[136] And they do watch each other how they do it.

Trilateral Relations are Rather Bilateral

How does China perceive the West? By watching Chinese top politicians, we can conclude that China perceives and takes the West together, i.e. as a whole. It often links its positions towards the USA to those adopted towards the EU. For example, the visit to Washington by Chinese President Hu Jintao during January, 18 – 21, 2011, considered by many analysts as the most important in thirty years, had been preceded only a week in advance by another visit made by Chinese Vice-premier Li Keqiang to three important EU member states (Spain, Germany, UK) between January 4 – 12, 2011. Thus, given the close relations in all possible areas between the EU and the USA, which together represent "the West",137 we could postulate that at a global scale we have both a triangular, or a trilateral, relationship between the EU, USA and China plus a bilateral one between China and "the West".

Let us look at the criteria used by each of the three to take positions toward the other two of the trilateral. By taking for example a "Realpolitik" approach, an analyst can notice that these three biggest economic actors on Earth, struggle in the first place for the defence of their own interests. In this endeavour, the USA, the EU and China point their economic diplomacies sometimes one against the other two and some other times neutrally towards the other two.

At other times, each of the three (grudgingly) heed to economic interests of the other two. This behaviour does not necessarily mean they give up on their own interests, but that they understand that their own interests can at times be better served, at least for specific time-spans, by accepting parts of the interests of the others.

Within this trilateral relationship, we have situations in which at times China plays off the EU against the USA and vice-versa. Although the EU may, as an international governmental organization, appear to be a slowly declining global economic force, it definitely still contributes to changing individual Western countries´ positions and attitudes towards rising China. For example, Europe repeatedly withdrew its critiques of Beijing, to the chagrin of Europe's traditional ally, the USA, thus weakening the cohesion of the Western block. The EU had and has to be mindful of what foreign policy it plays towards China because a successful Sino – American détente (for example in the long ongoing renminbi pegging wrangle between the two), could allow a G – 2 global dominance which is not really in the EU´s interest, as the latter could be excluded from participating at global leadership.

Sino-European Relations

As the EU is not yet a politically unified entity, it acts primarily as an economic power. Therefore, it is to be expected that most of the cooperation between the trilateral parties would happen first in economics: investment, commerce, macroeconomics and less the field of politics.

When Sino – European interests become too convergent they can at times be set against those of the USA. By noting for instance how China's repeated acquisition of European sovereign debt bonds strengthens the monetary safety net of the Euro-zone by strengthening the single currency

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[136] Just think of the multilateral institutions in which all three parties are members: UN, WTO, IMF, World Bank, G20, BIS (Bank for International Settlements). They had and have the interest to keep these organisations running smoothly.

[137] US and EU leaders call themselves for more convergence in the bilateral relations of these their two entities. For details on this, it is useful to consult the paper of the Transatlantic Task Force on Trade and Investment to be published next year by the European Centre for International Political Economy, Brussels.

we note how this is indirectly weakening (as a collateral effect) the global status of the US dollar as the main global reserve currency. Furthermore, China is serving EU interests in individual cases too. Here we think for example of public procurement, such as the repeated purchases of Airbus aircraft instead of Boeing. As China is a centralized economy, such purchases can be interpreted without the fear of error, as acts of economic diplomacy. Such acts do give China a leverage vis-à-vis the EU but also places itself into a position of being unable to promote its interests vis-à-vis the USA in a direct way. For this, China requests that Europe presses the USA to soften up its stance in other areas toward China, such as the lifting of the arms exports embargo, or on the currency pegging, et alia.

In its turn, the EU opened its markets to Chinese products thereby sacrificing a lot of its industries, e.g. textiles, steel, etc. Most of the largest European multinationals and their suppliers (value chains) outsourced part of their production to China already starting with the early 1980s.

To illustrate the range which Sino – European relations cover, we enumerate several topics discussed during the Thirteenth and the Fourteenth EU – China Summits.

If we look at the macroeconomic cooperation agreed by the Chinese and Europeans, we note the awareness during the Thirteenth Summit for concerted new efforts towards the creation and implementation of healthy fiscal policies (the Chinese also have taken up debt) which can guarantee the sustainability of both partners´ public finances, as they are inextricably linked. Equally, these policies are dovetailed with structural adjustments which cater for a balanced growth which will ultimately result in a consolidated global economy to the benefit of all others.

It is clear by now that during the Fourteenth EU – China summit, the EU – China partnerships were to be reaffirmed. As observers predicted, EU Commission President Barroso was to state there that the EU wants China to be part of the solution in addressing some of the pressing issues facing the international community. This means that the EU was to invite China to participate actively in shaping the future world order. This invitation was to mark a pressure for a visible shift in China´s national strategy as it moved away from the traditional stance run under Deng Xiaoping: „observe developments soberly, maintain our position, meet challenges calmly, hide our capacities, abide by our aims, remain free of ambitious and never claim leadership"[138]. An increase of Chinese political weight is pursued by the West not only with the aim to consolidate the world's economy and ensure compliance with the Doha Round of multilateral trade negotiations within the WTO, but also with the global objective to diminish growth and development discrepancies, combat poverty and reform IMF contribution quotas. Thus, China is getting closer to be accepted by third parties as an active architect of the structure of the future international economic system.

Chinese participation to global leadership is by now not any more only theoretical, but also practical: with respect to practical business the EU – China Business Summit has been created at the initiative of both parties. It is being attentively sponsored by the EU and China´s political leadership and although created only in 2003, by 2012 was to be in in its seventh year of existence.

Further, topics of global interest such as climate change and energy policy are not be omitted from the dialogue between these two global powers. Here, the dialogue aimed to save energy resources, to render consumption more efficient and to stimulate renewable energy production. Thus, the EU – China Partnership on Climate Change and the EU – China Energy and Environment Programme have become catalysts for political and practical exchanges: research enterprises and especially small and medium-sized enterprises (SMEs) have been encouraged to cooperate on energy research in order to promote resource conservation and a reduction of greenhouse gas emissions.

International day-to-day EU-China cooperation has on the agenda other issues that are noe economic. Among these combating piracy in the Gulf of Aden, exploring further areas of common interest. At the Thirteenth Summit, the attendants signed a Cooperation agreement on oceanography which provided legal substance to this high level meeting. It reinforced not only scientific research, but can act indirectly as catalyst to promoting specific Chinese interests, such as those in the South China Sea.

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[138] *See Guy de Jonquières, p. 7.*

The 2011 EU – China Year of Youth was another initiative, explicitly encouraged by the leaders of the two parties attending the summit.

Furthermore, during the first edition of the EU – China High Level Cultural Forum (October 6 – 7, 2010, Brussels) it was decided that 2012 would be declared The EU – China Year of Intercultural Dialogue.

Then, although at first it seems that by the first decade of the 21st century the EU has "de facto" sacrificed its traditional championship of human rights and dignity in its dealings with the Chinese (apparently) for the benefits of its commercial and trade interest, it is not really like this. For the Fourteenth summit a new "idealistic – ethical – moral" proposal was in preparation of being made by the EU. This was expected to make sure that Chinese – European dialogue should involve not only investment, commercial, macroeconomic, political and cultural levels, but also a new level to be called "People – to – People – Dialogue." This means that the soft – power of EU diplomacy might not be as fallen asleep with respect to promoting ethical – moral aspects abroad and towards its business partners, as it might seem at first in a more superficial analysis. Exporting traditional European values seems to still be an issue of interest to EU negotiators and that these have not been completely abandoned.

Sino-American Relations

If we turn now to Sino – American relations we will notice several reasons for which the USA stops short of promoting at any cost neo-liberalism and the free-markets doctrines in China as it does in other countries e.g. Eastern Europe. For example, it upholds its arms exports embargo on China not because it believes selling arms is unethical – although many leading USA politicians and civil servants boast to be practising Christians – but because of its self-care and fear not to lose its own military technology superiority. Lifting the US arms embargo on exports to China, would be a crucial mistake for the USA because it will allow the Chinese to "copy – paste" US technology. The mistake would be capital because in the current circumstances of a US burdened by high levels of debt, by high costs due to overstretched global military presence, its only effective defence is its military power which draws on this technological superiority. As late as the crisis of 2007-2009 economics in no longer an efficient defence tool for the USA.

This means self-interest-driven power politics prevail over ethical reasons. In this imperfect, often unjust and conflict ridden world, losing the technology edge would be disastrous not only for the USA, but for the EU too, since all the European continent rests peacefully – as we should never forget – within the security architecture guaranteed mainly by the US nuclear umbrella. Thus, US positions toward China revolve primarily around self-interest and not around ethics.

US defence financing could be threatened by the fact that ca. $800 bn. of America's total sovereign debt of ca. $14,000 bn. (100% of GDP) plus other more than $ 2,650 bn. of US private and company debt are held by China. The majority of manufactured goods sold in the USA are made in China and the US does not seem to be too bothered. On the contrary, it is Beijing who is dissatisfied with Washington because it is printing too many dollars to cover the post 2007-2009-crisis quantitative easing programme run by the Federal Reserve. The quantitative easing programme weakens indirectly the purchasing power of the trillions of dollars hoarded by Beijing and other creditors which weakens its leverage on the US. On the other hand, Washington itself is displeased with China's pegging the renminbi, thus adding to the US need to run for decades large trade deficits with China (mounting to over $457bn yearly).[139]

What matters in this triangular economic and political diplomacy among the three biggest actors on Earth are certainly not only macroeconomic figures and specific issues on the agenda. It is the meaning these figures have in the wider context of the cost of debt and of subsequent diminished credibility of state actors. Credibility is connected to values, to ethical and morally predictable behaviour of sovereigns. The West`s visible gradual drop in credibility in the last decade or so and China´s policy of economic and structural development at any cost, even at that of ignoring its own citizens´ human and social rights, that of the environment, corrode the value grounding of each of

[139] *See the homepage of Bernard Sanders, US Senator, http://sanders.senate.gov/graphics/museum_ltr.pdf accessed 30 September 2011.*

the three actors. As a result of the decrease in credibility and decrease of predictability, we are faced with a threat of global instability and turmoil.

This is problem and should not be brushed aside but be addressed. Therefore, in order to act proactively, we have to detect values and criteria, ethical and moral aspects within the EU – USA – Chinese trilateral relations which can make the global system continue to work. To trace these, we will look at political identities, cultural and historical roots, and of course, last but not least at the economic figures which together define national interest, diplomatic action and style.

B. Contextual Elements of Western – Chinese Economic Diplomacy

1. Political Aspects of Applied Ethics in Chinese – Western Relations

The positions of power recently acquired by China in its relationship with Europe and the USA have been achieved with enormous and continuous efforts for more than one generation after the Cultural Revolution of Chairman Mao Zedong was abandoned in 1978. Placing this development in its historical and cultural context, we note that the unsaturated development drive of China is comparable in its motivation and results to that of the Meiji Restoration of Japan which had taken place a century earlier, between ca. 1867 – 1900. Just as Japan "caught up" with the West within one generation, so that certainly by 1913 it had acquired o position of power toward the West and also its major partner in Asia, similarly China managed to catch up within a generation and became a major partner of the West, certainly by 2010.

Developments in China can be perceived as "positive" if we first look at the macroeconomic indicators. According to these, China boomed since the early 1980s with a GDP growth rate of between 5 – 13% per year. The value of exported goods and services constantly moved up. Chinese and foreign investment in infrastructure and manufacturing relevant assets and technologies continued and grew year by year. More and more Chinese found work in industry rather than agriculture and the society succeeded to dump more and more of its traditional way of living. The first examples are the universal uniform clothing and bicycles, which were replaced with

Western fashion, respectively cars. Studying and making holidays abroad were added to all of this. This is the good news from China.

But it is not all news. Things are different if we look at political aspects in domestic affairs, human rights and social security. First, regarding political aspects, while the Chinese leap forward in macroeconomics, the reverse is insufficient individual and collective freedom, lack of democracy, human rights, human dignity, disregard of ethical and moral aspects, disregard of environment protection.

Photo 1: Exports and business delegation of the Romanian pharmaceutical industrial manufacturer "Terapia" Cluj in China, November 1972.

Source: Author´s (Muresan) private archive

Paradoxically, while in the West democracy is inseparably connected to economic wealth and development in China it is not. These deprivations affect precisely those hundreds of millions of Chinese women and men who are working to push China up. It should not be like this. The political doctrines, basis for the values above, which have been the source of Western prosperity after the end of the Thirty Years War (1618 – 1648) and its subsequent industrialization, democratization and liberal economic system after the 1780s, have not been (yet) accepted and implemented at institutional level in China. Thus, these deprivations cumulated over time produced in the meanwhile in China „rapid escalation of social unrest... (and)... the level of corruption is alarming"[140].

Further contrasting with its good macroeconomic figures, China seems nowadays to lack an alternative political doctrine other than the publicly declared unique political doctrine of Communism. Probably, Chinese élites believe that denying political pluralism and keeping people together at a declaratory level, secures for now a more successful and fast national development. China seems to want to rank again among the most important countries in the world as it had as late as the 18th century. This drive has been promoted at any cost after 1949 by the Communist leadership, even at the cost of disdain for the human rights of its own citizens. On the contrary, "the other China" (Formosa, Taiwan) did engage in favour of human rights of its Chinese Taiwanese citizens: through its President Chang Kai-shek, Formosa even was a member of the Drafting Committee of the Universal Declaration of Human Rights in 1948 and followed the path – in politics and economics – pursued by the West.

Whilst at first the US partnered with Taiwan in what relations with China are concerned, at a later point, being entangled in the dynamics of the Cold War, the USA as leader of the West decided by 1978 to a shift in this policy it had been pursuing after 1949. In 1979 it recognized Communist China as its main bilateral partner in its relations with the Chinese and dropped Taiwan. Of course, the Europeans did not really have a choice in this and followed the USA. This shift also marked a de facto distancing of the US foreign policy from ethical and moral values towards more pragmatic dealings. The opening of bilateral diplomatic relations between the USA and the People´s Republic of China in 1979 marked this shift and is an example of moving from Wilsonian moralism to Nixonian pragmatism.

From Moralism to Pragmatism

This change in the West´s stance, away from its traditional support for Taiwan and towards mainland China, was co-brokered not only by USA State Secretary Henry Kissinger, but paradoxically by the Romanian President Nicolae Ceaușescu too[141]. As Nixon was pursuing the containment policy towards the Soviet Union and had been countered by it in the Vietnam war, he was looking within the Soviet camp for Communist states less willing to follow the Soviets. Among other attempts, he visited Bucharest in the summer of 1969[142]. Romania had become known as a maverick Communist country due to its refusal to join the Soviets in invading Czechoslovakia in august 1968. In Bucharest, during talks, the opportunity arose for a Romanian brokerage of a new opening of mainland China towards the US. The context for this was that of the Cold War Sino – Soviet split and the US containment policy. As Romania had been playing the maverick role within the Soviet camp, it had an interest to be allied not only with the Group of 77 lead by Yugoslavia´s Iosip Broz Tito, but also with anybody who were not the best friends of the Soviet Union, even the USA and of course China. On its part, China´s interest to move out of its international isolation within the Communist camp became arduous after the one month long Sino – Soviet border clashes of 1969. The considerable part of the China – USA brokerage was done by Romanian foreign policy in preparatory negotiations during 1970 – 1971. Ceaușescu and a Romanian official delegation visited China in June 1971[143]. Subsequently, the first visit of a US President to mainland China took place in 1972, when Richard Nixon met Mao Zedong. The opening was done.

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[140] See Guy de Jonquières, p. 1.
[141] See Constantin Vlad, 2006, p. 605 - ff.
[142] See Thomas Kunze, 2009, p. 182 – 184.
[143] See Thomas Kunze, 2009, p. 188. Ceaușescu had built as of 1964 good relationships with the Chinese Communist leadership. His state visits to Mao Zedong in China in 1969 and 1971 should be reanalyzed in order to clarify whether or not it had ground breaking effects in China – USA bilateralism.

Western Move Away from Moralism to Pragmatism Grows Wider

If continuing to look for ethics and morals in international politics, another quite recent example of the shift away from morals and towards pragmatic interest driven policies is the striking turn of some Western state presidents and high government officials in their relations to state presidents of Arab and North – African countries before and after the Arab spring of 2011. Take for example the positions of the French President Sarkozy and Italian Prime Minister Berlusconi toward Libya or Tunisia in early 2010, compared to those in late 2011. While President Sarkozy had allowed Ghaddafi to plant his presidential revolutionary tent in the garden of the Elysée palace in 2010 during an official state visit, by spring 2011 he had become the leader of the Western military alliance to dethrone Ghaddafi. Also, Berlusconi followed the French in the 2011 NATO operations in Libya, while just a few years earlier he had called Ghaddafi his "friend".

Nowadays, no Western government really asks the question any more whether it is ethical or moral or not to talk to dictators or rogue states. It simply does it if it thinks it fits economic interests first and political interests second.

The pragmatization of Western foreign policy is a symptom of a systemic conflict of interests between sales, exports, job preservation which collide with ethical and moral foreign policy goals. This systemic collision certainly contributed to the erosion of the credibility of Western political style across the world in the last decade. During the last twenty years after the fall of the Iron Curtain in Europe, the West abandoned almost all traces of its traditional role of exporter of Christian values. Europeans abandoned Christian missionarism and the US abandoned Woodrow Wilson's moral theology approach in international politics which it had brought to Europe at the Treaty of Versailles.

But it is on such values that the political principles were built which brought the Europeans and the USA since the mid 19th century to the position of accepted global leaders.

It may be true that the time for the West´s "leadership is now... as we live in a global economy that is largely of our (the West's) own making" [144] and it dominates the international system´s multilateral institutions. But this special position is not due to the creation of credible values now, but to inherited effects of values created by past generations.

2. Trade and Investment Aspects in Chinese – Western Relations

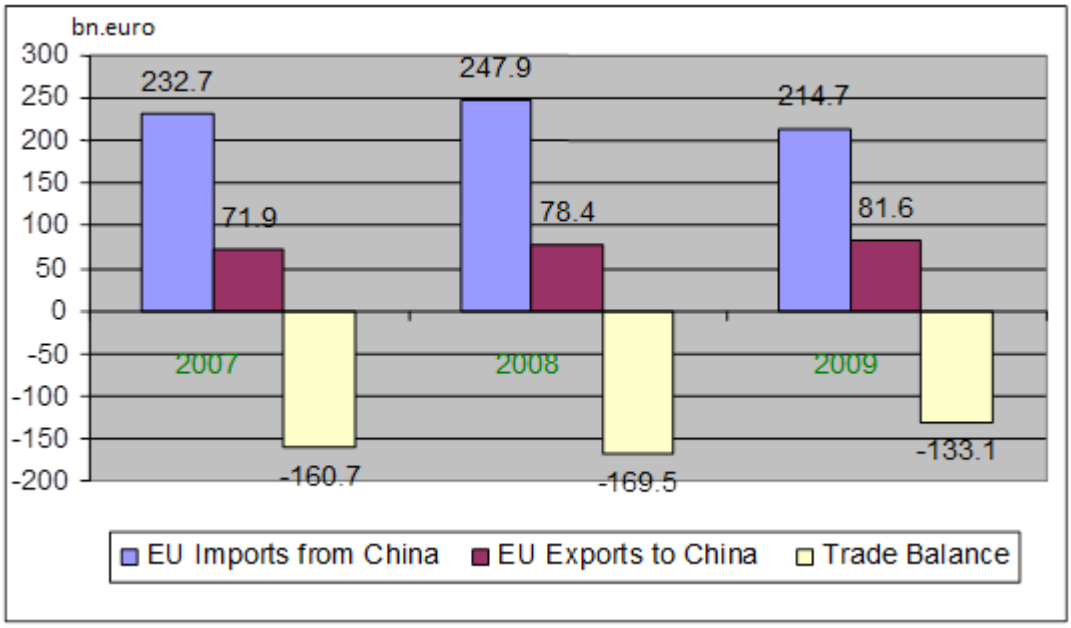
In order to be able to draw some conclusions related to these aspects, we will have a look at current account balances in West – China relations.

As known, USA – China trade runs to the benefit of China who by the end of 2010 was able to cause a deficit of the US in their bilateral trade of ca. US$ 460 bn. and hoard as much as US $ 3,300 bn. in cash. As we can see from Chart 1, the EU also runs a trade deficit with the Chinese, but which is five times smaller than that of the US. "The invoice from the China shop" is still to come, put it an edition of 2009 of The Economist newspaper.

Outsourcing to China of a huge part of the Western value production chains has certainly been a factor of progress for both: for Western companies who succeeded in reducing manufacturing costs, but also for China who succeeded to build up an industrial infrastructure, and instruct its labour force in order to be able to participate in the Western production, delivery and sales chain. Still, the product planning and product identity creation remained in the West and the West was keen to defend this core element of its productivity and competitiveness superiority edge by skilfully using the tool of intellectual property laws.

[144] *See Heather Conley, 2011, p. 97.*

Figure 1 – EU27 Trade with China

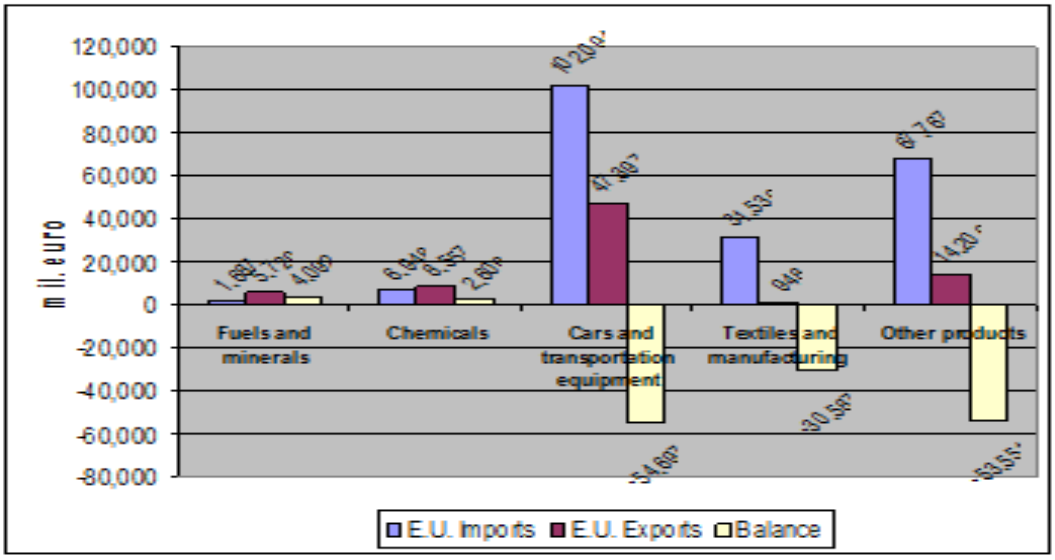


Source: Eurostat, Statistical Regime 4

Chinese surpluses in trade with goods are based on the West´s abandonment of its traditional doctrine (originally of Christian protestant descent) of "savings capitalism". As of the reform of the Bretton Woods global monetary system of 1971 introduced the passage to free floated exchange rates and abandoned the gold binding of the US dollar[145], the West de facto embraced a capitalism of "growth by spending in deficit". This shift allows (some big and some small Western countries) to run deficits over longer periods of time. These are covered by the others, those who run surpluses. As issued money on Earth is limited, the balance across the world must be zero at any year end when the balance sheets are closed. Paradoxically, even though declared Communist, China hoarded hard currency over decades and thus behaved as if it believed in "savings capitalism". On the contrary ever after 1971, the West moved to "spending in deficit" capitalism and the Chinese surplus was absorbed by Western deficit.

Would it be speculative to say that intelligent (-ce) circles in the West believed or thought that both the West and China would be better off if it proceeded like this: China to lend its monetary surpluses to the West and the West to invest in technological breakthroughs which, in the end, would benefit all?

Figure 2 – EU-China trade, 2010



Source: Eurostat (New Cronos)

[145] *See Krugman, Obstfeld, 2003, p. 546 -.*

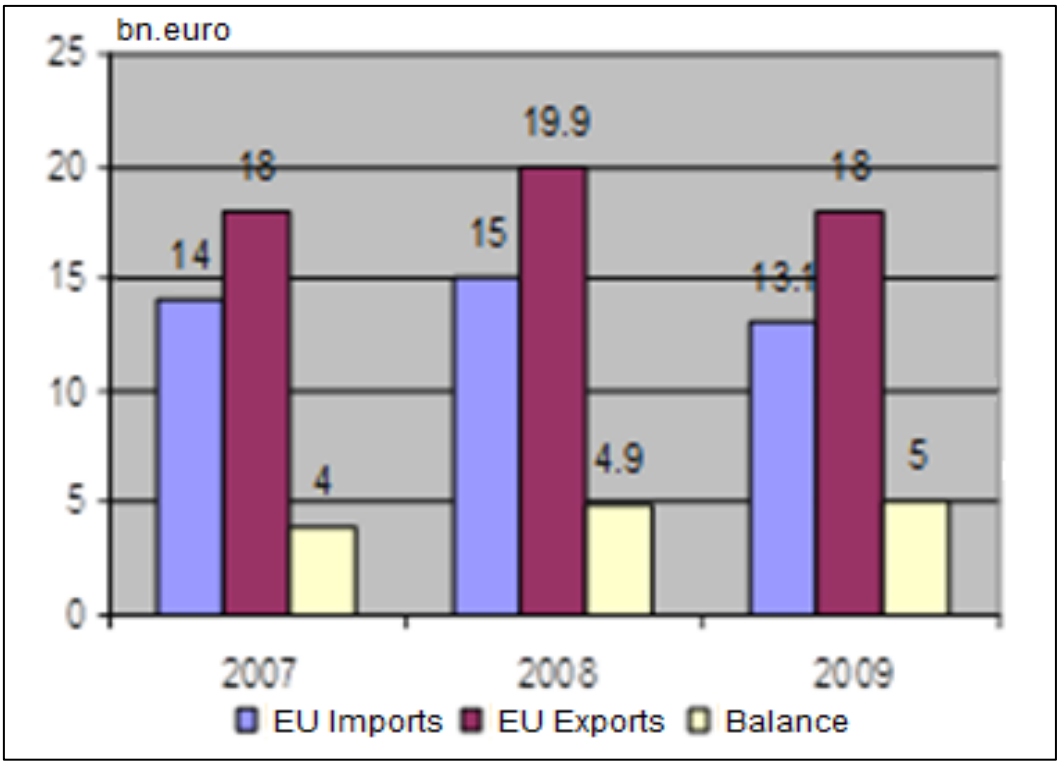
This certainly is a good deal for the West, as long as the monetary reserves of China are 90% in US dollars and Euros and China measures its own economic success in these currencies – albeit guaranteed by the West (sic!).

On the other hand, new research put forward the idea, that US growth by the "spending in deficit" doctrine was not necessarily only a "seize the opportunity" policy, but also an effect of increased inequality in domestic US income as of the early 1980s and a need arisen in the Cold War. Processes of deregulating credit rules in the 1980s, 1990s and 2000s for individuals and companies were meant to ease access to cheap money and to cover the liquidity gap for the population and boost consumption. This deregulation "party" was exacerbated after the collapse of the Soviet Union camp. The US and its "dependent branch" the EU had remained the sole economic superpowers on Earth without any checks and balances from other powerful competitor countries.

3. Currency Tensions

With regard to the Euro area, which as we know is undeniably interconnected with the USA economy, European officials claim that as for now, an appreciating euro, coupled with the undervaluation of the yuan and the undervaluation of the US dollar hinders the recovery of economies in the Euro-zone. Therefore, the EU insists in multilateral and bilateral talks that the Chinese re-evaluate its currency, being in this on the same side of the barricade as the USA.

Figure 3 – China Services Trade (Commercial services excluding government services)



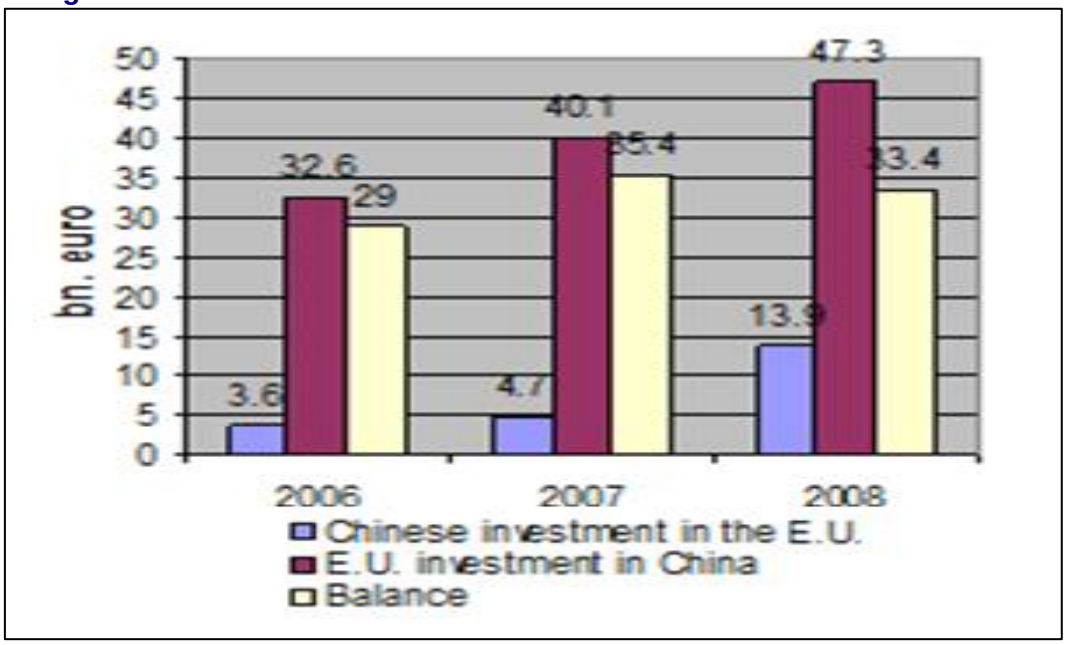
Source: Eurostat (New Cronos)

The spectre of a „currency war" of the Chinese with the EU too, and not only with the USA, pervades their many international summits, be they within the IMF, G-20 or in bilateral meetings.

High level meetings between the EU and China revealed tensions regarding the currency exchange rate euro / yuan. Tensions over the exchange rates are expected to last as long as the EU, just like the USA, will continue to run trade or current account deficits with China. The source of concern in this area is the continued undervaluation by state centralized currency control of the Chinese renminbi (RMB) or the yuan in its relations to other currencies with global relevance[146].

[146] *Paola Subacchi, 2010.*

Figure 4 – Total amount of direct investment between the EU and China



Source: Eurostat (New Cronos)

An undervalued renminbi is desired only by the Chinese

With regard to the US dollar, given the Chinese reserves of ca. US$ 3,300 bn., China is interested to see a strong and stable American currency in order to secure the value of its own reserves. Further it is also interested to keep the dollar value up in order to peg US exports to China. Moreover, a weaker yuan relative to a stronger dollar will boost Chinese exports, which again, will continue to benefit its national economy. An undervalued renminbi will last until the domestic Chinese market will have acquired sufficient purchasing power to make the Chinese development less dependent on international and Western consumers and capital. However, other analysts do not think this way about the effects of Chinese exports. They hold that „it is still widely, but wrongly, believed that exports have powered China´s rise. In fact they have contributed relatively little to GDP and growth – and possibly nothing in the past three years – because they contain a high proportion of imported inputs and modest level of local value-added. Their real importance is political, because the manufacturers involed in them employ large numbers of people"[147].

Chinese premier Wen Jiabao was firm in his statement following the Thirteenth Summit EU – China, arguing that a stronger yuan would not only impact (negatively) on China's domestic economy, but would also affect the global economy through a sudden drop in Chinese exports and shaking of production chains. Mr. Jiabao was certainly aware that he was speaking on behalf of the world's largest exporter. Thus, in his view, the political argument runs that a drop in exports and thus in manufacturing orders for China, could result in mass unemployment and increase the risk of „social chaos" in his country[148]. As it is the most populous country on Earth, the ultimate effect could be the destabilisation of the whole world[149], a not easily refutable argument.

4. Chinese Public Sector Procurement Orders. Open for the West too?

The new "EU trade strategy for 2020" includes not only boosting domestic competitiveness but also the support for European companies in their export efforts. For this, the EU is pleading with Chinese officials to open up public procurement market for European companies too.

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[147] *See Guy de Jonquières, p. 3.*

[148] *China had to deal anyway with „over 180,000 mass incidents across the country in 2010.more than double the 87,000 counted five years earlier for dissatisfaction over wages, worker´s rights, government seizures of land for development" says Guy de Jonquières, p. 5.*

[149] *Financial Times, 26 October 2010, Gideon Rachman, „China can no longer plead poverty".*

The good news for the West in public procurement is that given the amount of financial resources in the hands of the Chinese government, the Chinese state is a solvent client for European exports. But how can Western exports take place if public acquisitions in China still have a restrictive character and the State has the ultimate say in this country?

The bad news here for the West is that China, although declaratively a WTO member, is more or less still running a protectionist policy. Chinese government procurement rules are part of a larger plan designed by Chinese authorities to promote domestic innovation in order to reduce dependence on imported manufactured goods. This is a typical protectionist measure and nothing new to the ears of Western policy makers[150].

Economic doctrine of national economic systems, developed by the German economist Friedrich List (1789 – 1846), possesses a sound universal character. Therefore it can more or less be easily adopted by any country. The global economic crisis has brought back **national economic protectionism** on the world "economic doctrine market". Because it is not only the Chinese who are protectionists, they cannot be accused of amorality. The Doha round of the WTO[151] is itself stalled. Many governments protect domestic companies. Even the USA have to some extent fallen prey to protectionist measures: if we think about the „Buy American" clause there, about Trump`s "America first" policy it is obvious that the USA has become less credible when demanding China (and others) to open its public procurement markets to foreign enterprises.

Often, on the other hand, the EU has been friendlier (or weaker?) and less demanding in its dealings with China compared to the USA, giving here another proof of its authority through "soft power". Applied soft European trade power simply has been repeatedly asking during the last years in political declarations that the access to government procurement in developing countries and in emerging economies "be more symmetrical". It is not known to have declared anything publicly critical on China in a direct manner. This type of EU statements makes an obvious but only indirect reference to China, even though China has lots of public procurement resources readily available. According to one of the last economic stimulus packages adopted during 2009 against the effects of the economic crisis, China boasted infrastructure projects worth US$ 586 bn.

It has so far managed with assertiveness a progressive opening to the outside world. China knows how to explore reality on the ground and take it into account when negotiating the specific shortcomings (e.g. specific exceptions for regional governments and state companies) of the Agreement on Government Procurement. In response to the EU rather innocent request mentioned above, Wen Jiabao responded rather bluntly in the sense that his country treats all bidders equally, regardless of the country of origin. The EU seems now prepared accept the risk of retaliating in order to break into China's market for government procurement. More precisely, the EU has recently requested that China adheres to the 1996 "Agreement on Government Procurement" to which 41 WTO members have already subscribed. Even if China adheres, still not all areas are covered by this Agreement. Military procurement, for example, does not fall within its purview, neither do a number of other areas. The area of goods and services where many potential procurement orders reside, also does not fall.

5. Western Vulnerability Stems from its High Systemic Debt

We agree to a large extent with the assertion of some analysts that „reckless private lending plunged the West into crisis"[152] and brought it into today´s vulnerability relatively to China and toward other rising countries too. Due to repeated macroeconomic decisions to take up sovereign debt, and to deregulate to cater easier for enabling company debt and private household debt, all ultimately financed from the GDP, it is revealing to understand the size of total debt expressed in money and not only in percentages of GDP – as seen in Chart 5 – of the major industrial Western powers:

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[150] In earlier centuries the Western powers were big protectionists. Just think of the mercantilists, of Friedrich List, et alia.

[151] For good papers on the liberalization of trade, consult the European Centre for International Political Economy in Brussels www.ecipe.org/ .

[152] See de Guy de Jonquières, p. 2.

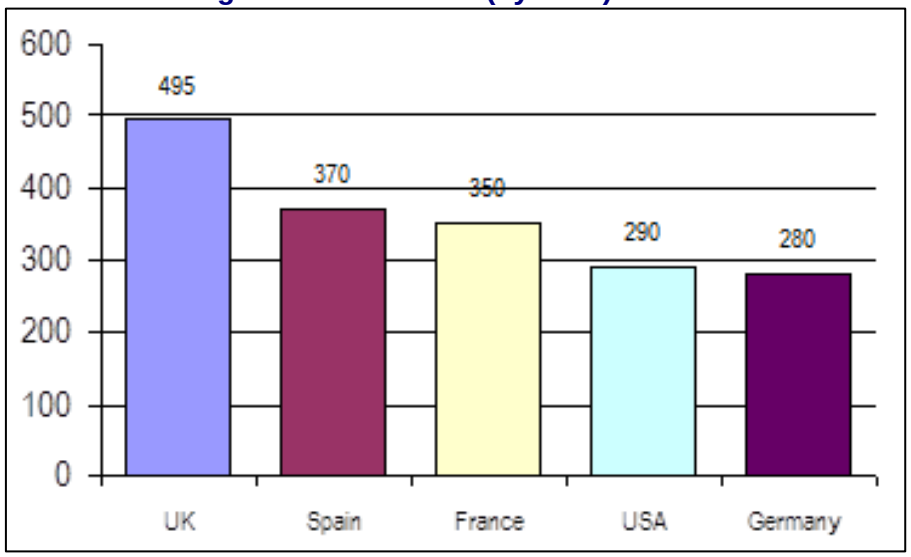
Nominal GDP[153] Total debt as % of GDP[154] Nominal value, 2010
USA GDP: € 10,785 bn. x 290% = € 31,277 bn. (or even up to € 43,140bn.) UK GDP: € 1,746 bn.x 495% =€ 8,643 bn. German GDP: € 2,500 bn. x 280% = € 7,000 bn. French GDP: € 1,931 bn. x 350% = € 6,759 bn. Italian GDP: € 1,548 bn. x 300 %=€ 4,644 bn. Spanish GDP: € 1,051 bn. x 370% =€ 3,889 bn. Romania GDP: € 140 bn. x 110%=€ 154 bn.
Total = € 62,366 bn. (or even up to € 74,215 bn.)[155]

The increase of the amount of total debt was done not only by decision of those governments who took up public debt. It was also built up by the Federal Reserve, followed then in its policy by the other Central Banks in the Western world. All of these, according to the neoliberal doctrine of promoting consumption, stimulating demand by deregulated financial markets and money markets, strongly simplified the possibility of taking debt. Money became cheap. Thus, to an accumulated total debt of the Western countries mentioned above of at least € 75,000 bn. There should be added the debt of other large Western economies such as the Netherlands, Sweden, Austria, etc. and also of Japan, Canada, Australia, New Zealand as Western dominated. However, even if we take into account only the ca. € 75,000 bn. from above, this is at least a third of the amount of total financial assets in circulation worldwide, estimated for 2010 at ca. 210 trillion[156].

Statistics on Total Debt Diverge

Still, the political conclusions drawn by using debt figures are often controversial, at times even intriguing and contradictory as can we infer by looking at Chart 6. For some countries, such as the UK, we see figures diverging from those published by other research (Chart 5).

Figure 5 – Total debt (by 2010) % GDP



Source: Own calculations based on „The Economist" of July 7, 2011

[153] For absolute figures see the coordinated macroeconomic indicators on www.principalglobalindicators.org . To express the USA total debt from US$ and the UK total debt from £ sterling into Euros we used the exchange rates of US$ 1.35 respectively £ 0.8335 for € 1. According to the Institute d´Études Politiques of the Sorbonne University, as early as 2008 the USA total debt had surpassed 400% of GDP, as it should also include local government and local community debt and the costs of its financing.

[154] See Chart 5.

[155] The figure is not easy to define because all debt should be calculated by taking into consideration not only the lending contracts due at the moment of calculation of the outstanding debt, but also the contracts already entered into by the sovereign but which are due only in 20 or 30 years. The latter can be pension contracts of civil servants entered into at the moment of calculation, but which will be due only in 20 or 30 years' time when the respective civil servants will retire.

[156] See The Economist of July 30, 2011 quoting McKinsey Global Institute which published the global outstanding financial assets among 79 largest countries.

Who is to blame for this? Whether the taking up of debt, the running of public deficits and the acceptance of private indebtedness was premeditatedly systemic or just indifference, is difficult to prove because of the contradictory statements made by relevant decision makers. One of them, Alan Greenspan, Chairman of the Federal Reserve between 1998 – 2007, defends in his book "The Age of Turbulence" of 2007 the neoliberal style of market freedom and thus of deregulation of financial and monetary markets. After the onset of the crisis, Greenspan's position had been criticized by other decision makers in the USA. One of them, Representative Henry Waxman, said in 2008 shortly after the Lehman Brothers collapse, that it is "Mr. Greenspan´s Federal Reserve – along with the Securities and Exchange Commission and the USA Treasury – had propagated the prevailing attitude in Washington … that the market always knows best." Well, reality showed the contrary: they don't. In one interview given after the crisis to the Financial Times, Greenspan admitted himself he had "made a mistake"[157] by pushing that high level of deregulation of financial and monetary industries which the USA got. But had he really pushed for too much deregulation? Well, from the point of view of healthy monetary policies, yes. But probably from the point of view of US systemic needs and problems as of 1971 onwards, he had not.

Still, in order to make the ongoing debt debate appear less alarming, we have to say that if the impact of debt is to be assessed realistically, the **total cumulated savings available in the indebted countries should also be taken into account**. For example, in the case of Germany, if taking the figure in Chart 5, that country's net debt is only ca. € 2,000 bn. because out of the total German debt of ca. €7,000 bn. the total savings of the population of ca. € 5,000bn[158] have to be deducted. But still, the savings are capital in private hands which the Government cannot just simply use it to finance public or corporate debt, because it is private property. Still, this private capital is there, although not directly usable on the market, without increased credibility on fiscal and economic policies of institutional actors in front of private donors (treasury bonds with low interest rates or issued for specific projects).

A part of China's negotiating power resides in its healthier public finances

We should not forget that in the meanwhile China also takes up debt, at least public debt. This will have amounted by the end of 2011 to ca. 43% of GDP. With respect to private debt, figures are not reliable. When saying that „China´s debt problem (is) impossible to measure precisely"[159] other analysts hold the same. Private debt in China is not really relevant: private citizens´ monetary debt resposibilities arising out of false economic behaviour can be overruled in a totalitarian state by a simple decree (cancel debts). Public debt in the context of its currency reserves, make China financially much healthier than most Western countries. Thus, the negotiating power of China in economic diplomacy is at hand.

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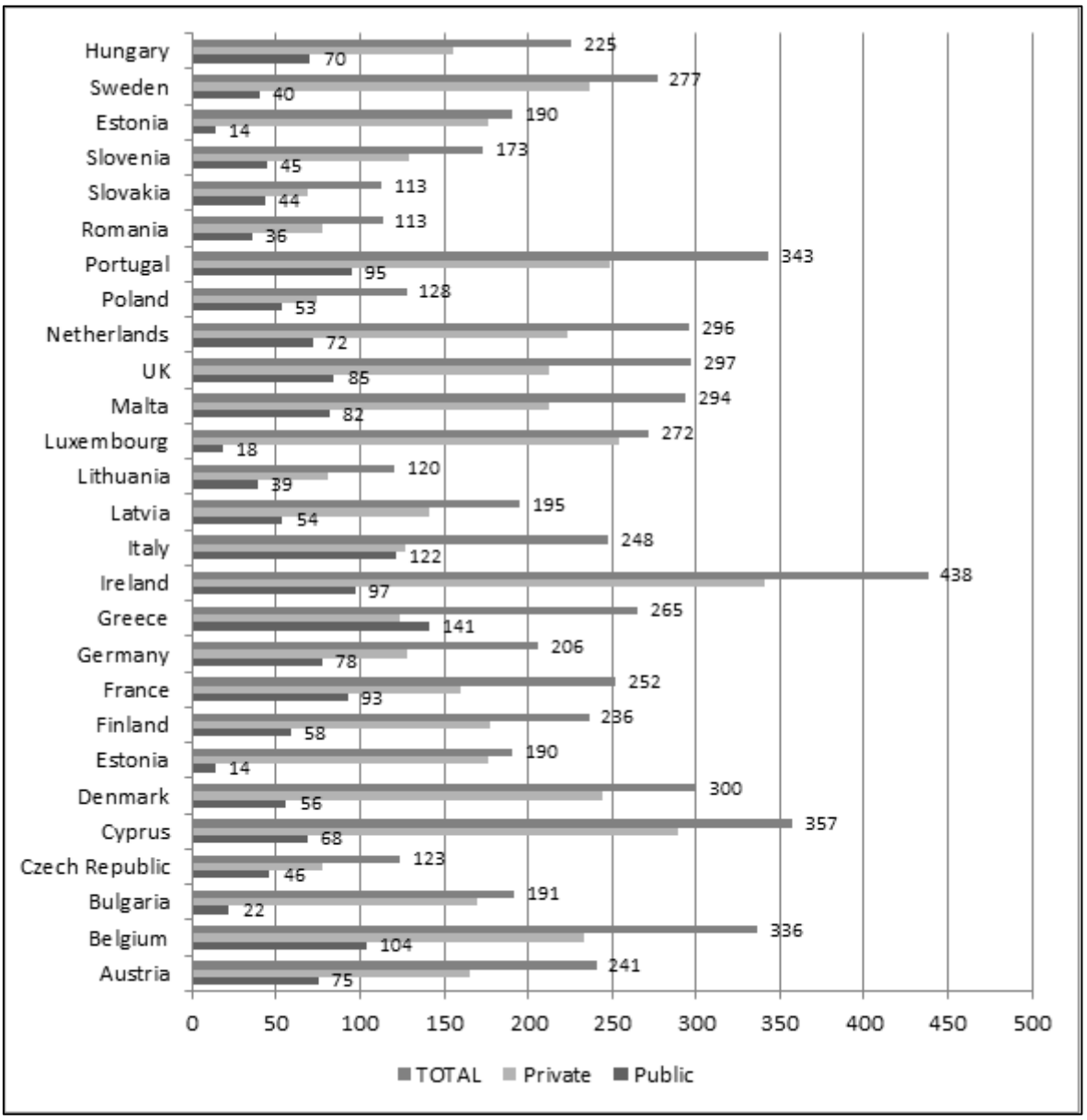
[157] See the article „I made a mistake, admits Greenspan" in Financial Times of October 23, 2008 by Alan Beattie and James Politi.

[158] Monetary assets of private households in Germany amounted to € 4,680 bn by the 3rd quarter 2009: http://www.bundesbank.de/download/presse/pressenotizen/2010/finanzierungsrechnung_abb.pdf each of the other countries has monetary assets available and their amount should be deducted from the total debt in order to get a more reality based impact assessmetn of the risks implied by total debt.

[159] See Guy de Jonquières, p. 2.

Figure 6 - Total (combined public+private) debt, % of GDP.



Source: Eurostat, Economist Intelligence Unit, 2011

6. Social Security and Environmental Aspects of Development

Human rights, labour and environmental aspects relevant in Western- Chinese relations are part of the area covered by the ten ethical principles adopted in the UN Global Compact[160]. As a permanent member of the UN Security Council, but also due to its allegiance to achieving equality through communism, China has quite specific (theoretical) stipulations on social security. Similarities between the UN and Chinese definitions of social security do exist.

Domestically, the main legal basis for Chinese Social Security is Article 14 par 4 of the Chinese constitution of 2010. This stipulates that social security is state driven: "The state builds and improves a welfare system that corresponds with the level of economic development."[161] In spite of the strength of the national Chinese drive for self-development, the results achieved until now with respect to implementing all over the country and across social classes a functional and sufficient social security system, similar in its systematization to that of the West, is not yet satisfactory. Nevertheless, progress

[160] *See http://www.unglobalcompact.org/AboutTheGC/TheTenPrinciples/index.html*
[161] *See homepage of the USA Constitution online, whereas comparison the text of the Chinese Constitution is also presented: http://www.usconstitution.net/china.html#Article14.*

has been done as there has been an ongoing creation, adaptation, reform and expansion of the Chinese social security after the founding of the People´s Republic of China in 1949.

Social security expenditure is not so very different to that of the West with respect to the financial resources available to the system. If in the West it generally accounts for 10 – 35 percent of GDP, with 8 – 10 percent of GDP in 2011 in China it still is high, whereas in other developing countries we register ca 2.6 percent of GDP. However, what is really different to the West, is that in China there is a huge gap between urban and rural areas, between coastal and inland regions: "the coverage of social security is 92.1 percent in cities and towns, and is only 2.7 percent in rural areas"[162]. In 2010, urbanization in China was close to 50 percent. Therefore, there are at least 700 million Chinese out of the total 1.4 bn. population working in the low income span and with very little social security. This lack of uniformity in access to social security benefits across social classes and geographical regions poses moral – ethical questions.

"**China's security system** is composed roughly of three parts including 14 items. The **first** part is the social security item supported by state finance, including four items: social relief, social welfare, special care to and placement of disabled servicemen and family members of revolutionary martyrs and servicemen, and community service. The **second** part is social insurance introduced under the compulsion of state laws, which includes six items: pension, unemployment, and medical care, and industrial injury, maternity insurance and housing security. This is the main part of the social security system. The **third** part is commercial insurance, introduced due to the principle of voluntary participation. It is aimed at making profits through supplying social security as services and includes three items: personal insurance, enterprise insurance and mutual aid insurance as the main supplement to social insurance."[163]Here is a concrete example: under the 2005 initiative to overhaul the health care system and make it accessible to the poor and to rural areas, called "New Rural Co-operative Medical Care System" (NRCMCS), there is a facility created that only 20% of the health care costs are borne by the insured patient, the rest by the central or provincial governments. In 2005, under the NRCMCS, the average annual cost of medical coverage was 50 yuan (€ 6) per person. Of that, 20 yuan is paid in by the central government, 20 yuan by the provincial government and 10 yuan is paid by the patient. Apparently, until 2007 around 80% of the rural population of China had signed up (about 685 million people). The system is tiered, depending on the location. If patients go to a small hospital or clinic in their local town, the system will cover roughly 70-80% of their bill. If the patient visits a county clinic, the percentage of the cost being covered drops to about 60%. If the patient requires a specialist in a modern city hospital, the plan would cover only about 30% of the bill."164

For now, two out of the three parts of the social security system are at least partly, if not wholly, state born. But, if implemented (which is not done for all business sectors), social security produces costs which increase labour costs within a company. These influence overall company market price competitiveness. It is not only Chinese exports which remain cheap because labour costs are low, but these amounts, which should normally be spent on social security, social welfare, health care of the citizens, become monetary leverages for Chinese foreign economic policy. Further, the low (compared to Western) level of employee contributions to social security leaves more money in the pockets of employees, catering thus for the known Chinese saving rates of ca. 30 percent of all revenue[165] (2010). Thus, the social security money of the Chinese people is to be found either in the Chinese sovereign wealth funds, in Chinese foreign direct investment around the world – not only in Europe, but in Africa as well.

Furthermore, this money is also to be found especially in the purchase by Chinese entities, be they state or private and of Western debt such. Treasury bonds, various sorts of equity and derivatives of unsustainable debt issued by countries such as Ireland, Greece, Portugal, Spain, Italy are bought not only by the Federal Reserve and the European Central Bank via the quantitative easing programme, but also by Chinese investors.

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[162] *China's Social Security System, Title III (1), by Wu Jie vice minister, State Commission for Restructuring the Economic System, published by CATO Institute http://www.cato.org/events/china/papers/jie.html*
[163] Ibidem, Title IV.
[164] *Ibidem.*
[165] *See The Economist: Special Report China: Rising Power, anxious state, June 25th, 2011, p. 4- ff.*

Further, it is not only the low social security contribution percentages which created the high Chinese company competitiveness, but also the availability of cheap labour now for over a generation. However, this is about to change. „Labour costs face growing pressure from... demographics. China´s development has benefited greatly from a seemingly infinite supply of cheap labour. But a declining birth rate, a legacy of the one-child policy, is steadily eroding that advantage... China has the world´s fastest aging population... By about 2030 its population will start to shrink."[166] Thus, nowadays big and threatening China might cede its menacing place to upsurging India.

Bearing all of the above in mind, can mean that the envied Chinese economic progress, its declarative Communism have not yet succeeded to make the "Chinese man" to a "whole person": it does not cater equally for all citizens and does not cater enough to individual social security needs. "Whole person" is meant here in the sense of Western human dignity centered on a Christian theology view of man.

Is it ethical that the social security money, which should be made available on the basis of the principle of human dignity and human rights, of economic dignity, be used in international transactions outside the country it was produced in? Well, the answer is tricky and has to do with the "can"-s and „cannot"-s. Western countries in Europe and the USA had their own periods in history before and even during monarchic absolutism and even during the industrialization of the 19th century, when human, social and welfare rights were not being given due importance by the naturally responsible entity, the state and the employer. We know quite well that, for example as late as the end of the 19th century Western Europe was still using child labour force. Europe and the US used totalitarianism too in order to develop themselves. Only they did it earlier than China. If we look well, these have been achieved more or less dictatorially: first via the Church in the Middle Ages, then by the absolutist monarchs in the 15th-19th centuries and later by the dictatorship of market forces via the Manchester "laissez-faire" doctrine of capitalism. Paradoxically, it is especially during those periods, that the Western infrastructure and the maturation of Western peoples could be achieved. Therefore, if China is doing similarly now, is the West entitled to ask China questions on ethics or morals and to give advice on this?

On the other hand, the Chinese have to prove that they are willing to rethink their broad policy of "development at any cost". They should be seen willing to integrate the interests of those Chinese citizens for whom it started in the first place to press forward with the development and catching up policies it has been pursuing since 1949. Here, we mean that China would not be wrong to introduce as criteria for measuring its development, issues such as applied individual human rights, perceived human dignity, individual freedom of speech, a free market economy where its citizens can truly be dignified entrepreneurs and, last but not least, start viewing the environment not as the subject of development, but as a part of a world (divine creation) to which also humans belong. Of course, this shift in political philosophy cannot be implemented at once into practical realities. But it can be done by a gradual political and institutional reform process which should start sooner rather than later. „If reform is to be relaunched, the responsibility will fall to China´s next leaders, after they take office at the start of 2013"[167]. We will see how interested they are in pursuing the common good compared to pursuing individual and personal or national and public interests.

7. The Vatican´s Call for a Global Supervisory Public Authority Grounded in Ethical Principles

Although one of the core sovereigns of the West, the Vatican is not a member of the UN, the EU, IMF, World Bank, OECD or any of the other advice – providing, or donor, or international governmental organizations. Still, this sovereign is actively involved in crucial discussions regarding reforms in international political, economic, cultural and spiritual affairs.

In its doctrine or political positions, the Vatican brings inputs of ethical principles derived from Christian Catholic Social Teaching. It sees this applicable to policy design and reform and uses it as a vehicle to pursue its two millennium old missionary activity. This specific doctrine of the

[166] *See Guy de Jonquières, p. 4.*
[167] *See Guy de Jonquières, p. 4.*

biggest Church is in fact a political doctrine derived from the spiritual background of the Christian faith. The increasing globalization, the increasing interdependence in international economics, in international trade and finance as well as the mutuality of international politics requests, in the view of the Vatican, a coordinated interdisciplinary and multinational approach.

According to the Vatican's view, in international political institutions and legislation there should be applied concepts such as the universality of human nature, universal brotherhood, primacy of the spiritual over the political and of the political over the economy, common good, solidarity, subsidiarity, sustainability, and others. In practice, as of October 24, 2011 the **Pontifical Council for Justice and Peace** issued a paper in which it calls for the gradual creation of a "public Authority with universal jurisdiction... at the service of the common good"[168]. This paper also calls for profound reform of the political system, both internationally and nationally, i.e. for the gradual relinquishment of the international order created by the Westphalian peace (1648) system of national states we are still living in. The Vatican calls publicly for the passage to bigger units of political responsibility such as multinational regions (EU, ASEAN, etc.) and even of a single global political entity run by a sort of **Global Political Authority**. Indeed, nowadays, no international political, economic or social cooperation can be really sound and sustainable unless it takes into account all, or at least the vast majority, of globally relevant aspects and actors. But, there are obvious dangers to this: in its quest for global efficient governance, such a Global Political Authority can easily drift from (originally) a democracy into a dictatorship with global outreach where it can heed to the temptation to eliminate pluralistic political forces.

The Vatican believes that it is still quite a long way to go until such an Authority might become reality: "...a long road still needs to be travelled before arriving at the creation of a public Authority with universal jurisdiction... (and if this road is not followed) despite the great progress accomplished in various sectors, international law would risk being conditioned by the balance of power among the strongest nations"[169]. Furthermore, "in a world on its way to rapid globalization, orientation towards a world Authority becomes the only horizon compatible with the new realities of our time and the needs of humankind. However, it should not be forgotten that this development, given the wounded human nature, will not come about without anguish and suffering."[170]

It is here that the trilateral relationship EU – China – USA becomes interesting to the Vatican´s attempts to implant ethics and morals in global policies. On the road to this universal Authority, these three actors and the way they deal with each other will deeply affect the process of global consultations (G8, G7, G20, UN and other multilateral organizations) and of a "gradual transfer of national sovereignty in a balanced way to the global public Authority and regional authorities[171]. In other words, if the West and China would agree (at all) to the idea that ethical and moral values are desirable in their reciprocal dialogue and economic and political diplomacy, the Vatican expects that this road of transition should be less affected by distortions and suffering. The reasons are related to the fact that the actors creating the new world order it work together in a more coordinated and foreseeable manner than without links to ethics.

As late as the 1970s, Catholic politicians in the West were still threatened with excommunication if they voted policies which were not in accordance with Catholic doctrine. Now, this is changed and the freedom of conscience prevails over Church doctrine, but the Vatican remains the standard setter in ethics in business and politics in the West.

Whether the Vatican paper got it right or not, is still to be seen. There already are several signs of such concentration of cooperation at regional and global level in many areas. One of them is in that of statistic resources, quite an important area for any policy decision making. In 2008, the **Inter-Agency Group on Economic and Financial Statistics (IAG)** was created in order to coordinate on statistical issues and fill gaps in information highlighted by the global monetary – financial – economic crisis of 2007 – 2009 and strengthten data collection at a global level. It is chaired by the International Monetary Fund (IMF) and comprises the Bank for International Settlements (BIS), the European Central Bank (ECB), the Eurostat, the Organisation for Economic Co-operation and

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[168] *See Pontifical Council for Justice and Peace, 2011, p.32 and 41.*
[169] *See Pontifical Council, 2011, p. 21 and 26.*
[170] *See Pontifical Council, 2011, p. 40.*
[171] *See Pontifical Council, 2011, p. 38 – 39.*

Development (OECD) and the World Bank (WB). The IAG has a new product called Principal Global Indicators (PGI). These „provide internationally comparable data for the Group of 20 economies (G-20) and the five members of the Financial Stability Board who are not part of the G-20, to facilitate the monitoring of economic and financial developments"[172]. Once the information is centralized and its use institutionalized, decisions on national and international political economy affecting the global economy can be done in a more forecastable and globally coordinated way.

Furthermore at the level of the EU, there also is a new structure in place where there is concentration of cooperation at regional level and which is dealing with ethical issues. But its mandate is not covering enough areas for it to bring efficient and sustainable results yet. The so-called **European Group on Ethics** is part of the **Bureau on European Policy Advisers**[173] at the **European Commission**, acting directly under the supervision of the Commission's President. The Bureau currently has a mandate approved by the Commission but which does not yet cover ethics in central areas too. The mandate should be extended from science and new technologies such as bioethics and Internet and Communication technologies as it is now for the period 2011 – 2016, to also comprise ethical aspects in international politics, international economics and international social and environmental coordination.

C. Issues to Observe in Western – China Economic Diplomacy

Can Guy de Jonquières be right when writing that "the West should not make the error of assuming that China is some unstoppable force, endowed with overwhelming might and a long-term strategy for global domination. In truth, is China´s supposed power – political, economic and military – in practice much more limited than it may appear"[174]?

Some other political analysts ascribe the rise of China not so much to its rise "in itself" but rather to what is called "the end of the West" and to the need to involve here ethics and morals. "A robust discussion of today´s Western decline quickly transitions to conversation about moral authority and the place of American exceptionalism in the twenty-first century"[175] says Heather Conley in a book review published in International Affairs of 2011.

Thus, the issues to observe are several.

First, keeping the two views in mind, it is wise that the Vatican document remains on the radar screens of analysts. The views expressed by the Vatican's document are the first issues to be observed in Western – China political and economic diplomacy.

Second, the trade and investment figures seen above reflect the imbalances of Western – China bilateral relations: whereas the Chinese economy grew strongly in recent years, the European and USA economy went through recessions; whereas Europe and the USA grapple with sovereign debt, China accumulates their currency reserves. China's domestic consumption is soaring, but USA and Europe's consumption decreases or is stable at most. Although Europe's trade with China in services is in excess, this does not make up for the deficit in the trade of goods. These imbalances are highly visible foreshadowing potential friction in bilateral relations.

Third, do not oversee that there is „profound international uncertainty about China´s motives and intentions... and the issue is not whether China will „rule the world – a role it shows no sign of desiring or being capable of playing – but whether it can cope effectively with the international responsibilities imposed by its own development"[176] says Guy de Jonquières. This is a statement which can be applied to the effects of China´s rise.

These aspects rightly allow asking questions from ethical perspectives. One of these many questions is: are "running debt" policies by the major Western countries in the context of the simultaneous "running savings" policies by China, ethical? Is it ethical and moral for the West, as

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[172] *See http://www.principalglobalindicators.org/about_pgi.aspx*
[173] *Details can be gathered at http://ec.europa.eu/bepa/*
[174] *See Guy de Jonquières, p. 11.*
[175] *See Heather Conley, 2011, p. 976. Conley reviews the book of David Marquand with the same title of 2011 published at Princeton University Press.*
[176] *See Guy the Jonquières, p. 7 and 10.*

standard setter in international politics and international economics, especially in ethics and good governance since the 17th century, to take dangerously high levels of debt? Are even such debt heights ethical which threaten not only their own stability, but that of the financial, monetary and economic global balance of power too?

It is obvious that Western <debt driven growth> was, among others, a tool which has brought about not only the defeat of Communism, as it created a relatively higher Western productivity, but also helped achieve globalization much faster than if it stayed with the classical model of <savings driven growth> capitalism. But is it ethical to indulge into taking up so much debt that some Western countries (e.g. Greece, Ireland, Spain, Italy) be forced to accept investment from a country such as China? With <such as China> we mean primarily a country which does not acquiesce in the political doctrine of a free society, of democracy and of human rights, of economic liberty for all and which does not cater (yet) for environmental concerns. As „Chinese foreign policy is rooted in one fundamental imperative: keeping its regime in power... doing whatever is necessary to maintain rapid growth by keeping markets open, securing access to energy and natural resources and prevent the economy from being blown off course by external shocks"[177] China is primarily self interested. China **pursues de facto** the good effects of applied values and principles (freedom and free markets) which it **de iure rejects** by its declarative adhesion to Communism. In doing this, its authoritarian system is not appreciated by its citizens. As a result „China´s prevailing cultural ethos ... is exhibiting the worst of America´s materialism with none of its – admittedly tarnished – idealism." [178] say analysts. To what extent is it ethical and moral to engage in economic diplomacy negotiations with a country displaying this type of behaviour and how much to concede of fundamental Western principles in dealing with it? Even many African countries have resentment of China which is „recreating the Western imperialism that it publicly condemns...(and whose) approach still seems rarely to rise above a mixture of the chequebook and commercial opportunism"[179]. Therefore, the West is not alone in some of its perceptions on China.

Looking forward now, in order to maintain credibility – and thus also its own solvency – the West needs to urgently find a balance between its interests and its limits of credibility.

First, it needs to prove that it understands that its recent drift into exaggerated pragmatism in international political and economic affairs cannot be the final goal it really pursues. The challenge will be to insert ethics, principles and values into core areas of policies without being too hypocritical. It needs to prove, if it wishes to remain a reference point to the rest of the world that it is able to withdraw from the simplistic monetary selfishness of running deficits over decades it has been practising since the reform of the Bretton Woods system in 1971. Practically, this means the West has to prove that its declared wish to repay its debt is real and not only declarative and out empty tactics. For this, it has to set up a balanced savings programme credible to all its national and international creditors while at the same time not hindering growth.

Second, there is to be clarified what the rise of China means for the international system and for the West itself too. The global economic crisis of 2007 – 2009 has placed China at the forefront of global affairs sooner than it had been anticipated. As of 2010, most economic analysts agree that China has become the world's second global economic power after the USA with respect to the size of GDP. Also, as of 2011 it ranks first in value of exports, having overtaken Germany. Moreover, recent research published points to the fact that as early as 2017 or 2020 it is expected that China will have overtaken the USA by the size of its GDP[180]. Still, if looking at other figures, we notice that things are not as rosy as they might appear at first sight: Chinese „GDP per capita on PPP basis, ranked a lowly 94th worldwide in 2009"[181]. Thus, China´s bargaining power might be lower than it might seem and China is less developed than it seems if reading the media. If China is not that advanced, it means that the West still has a time window ahead to define new approaches in its economic and ethical diplomacy towards China. By new approaches, we plead that ethical values be incorporated into Western positions – maybe in the sense of the „People – to – People – Dialogue" be proposed at the Fourteenth EU – China Summit of early 2012.

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[177] See Guy de Jonquières, p. 8.
[178] See Guy de Jonquières, p. 9.
[179] See Guy de Jonquières, p. 9 and 10.
[180] See The Economist, June 25, 2011, Special Report China. Rising power, anxious state, p. 4.
[181] See Guy de Jonquières, p. 8.

Third, irespective of the nature of EU – China relations, these are inextricably linked to the developments between the USA and China. Even if the EU remains China's biggest trade partner and a part of Europe's sovereign debt finds answers in China's increasing currency reserves, Beijing regards Europe not so much as a global power, but as an opportunity for investment and technological acquisitions. As long as the **European External Action Service** is still in its inchoate stages and the EU member states do not speak with one voice, Beijing can deal with Europe by ‚divide et impera' policies. It can apply this policy toward member states and also toward the USA.

Concluding Remarks

The interconnection of economic productivity, social security, domestic and international investment capabilities and, last but not least, military expenditure capabilities, move the discussion about pathways in Western – Chinese relations to the field of ethics, and ultimately to political philosophy. This article holds that no political analysis regarding the robustness of Western (EU and USA) policy towards China will be complete as long as it does not include an ethics and values – based perspective. Here, specific European countries can supply the needed resources.

The EU (the worldwide largest market by consumers and by GDP), USA and China are the three major actors on the global political, economic and military stage. They comprise ca. 32% of the Earth´s population, 60% of its (nominal) GDP and the vast majority of the earth´s wealth. Therefore, their mutual relationships will affect for decades ahead the process of globalization It will do so regardless if we will or will not arrive in the future to a global political Authority as put forward by the Vatican.

Western – Chinese relations (and eventually honest partnership) should be regarded not only from an economic, commercial, financial, monetary, political, historical, cultural but especially from an ethical perspective. Only a broad look at this relationship makes sense and can deliver sustainable and correct conclusions. A look at the overall historical processes of exporting civilisation pursued by the West at an ever increasing pace since the discoveries of Columbus in 1492 will help too. The West passed-on (exported) across the world those values and know – how it had incorporated itself into its own identity through the centuries long syncretism of Hellenism, Judeo – Christianity, Byzantine history, religious struggles and later of bourgeois freedoms and industrial / technological revolutions.

Ethical Aspects Do Make Sense in Western-China Economic Diplomacy

Ethical aspects in the West´s relationship with China cannot be ignored. On the contrary, the emergence of a new international economic and financial system will be deeply influenced by the observance or by ignorance about ethical and moral values. They are applicable first at national level – especially in social security and environment protection – then in bilateral and in multilateral partnerships and ultimately at global level.

In order to avoid as much as possible unpredictable situations and painful turbulence on the road to more globalization and to increasing regional and global interdependence and coordination, ethical and moral values are needed to be practised by the three actors in their political and economic diplomacies and in their domestic policies. The reason for this need is simple:

in the current age of global instantaneous digital communication, transparency and universal access to highly detailed information in any field, the time of ignorance and subsequent easy abuse over our next of kin is over. The weak and small will easily know when their interests are ignored by the strong and the big. The era of universal and universally accessible knowledge requires that all actors (private and public) practice self – responsibility and respect of others. The big and strong should refrain from abusing the small and weak. And if they do not, they should be taxed, or be otherwise charged for indirectly causing public disorder.

Bibliography

Ian Clark, China and the United States: a succession of hegemonies?, London, 2011

Jonathan Story, EU-China relations: soft power versus brute force in the global marketplace, INSEAD, July 2010

Barry Eichengreen, Exorbitant Privilege. The Rise and Fall of the Dollar and the Future of the International Monetary System, Oxford University Press, New York, 2011

Alan Greenspan, The Age of Turbulence. Adventures in a new world, Penguin Press, 2007

Guy de Jonquières, China´s Challenges, prepared 2011 to be published as Policy Brief no. 01/2012, European Centre for Internatonal Political Economy, Brussels

Bernard Sanders, US Senator, Homepage http://sanders.senate.gov/graphics/museum_ltr.pdf

Constantin Vlad, Diplomația Secolului XX, Editura Fundatiei Europene Titulescu, București, 2006.

David Kerr, Liu Fei, The International Politics of EU – China Relations, British Academy Occasional Papers, Oxford – New York, 2007

Heather Conley, The end of the West: the once and future Europe, Review article in International Affairs 87:4 (2011) p. 976. Conley reviews the book of David Marquand with the same title of 2011, published by Princeton University Press.

Iana Dreyer and Fredrik Erixon, European Centre for International Political Economy – ECIPE, An EU-China trade dialogue: a new policy framework to contain deteriorating trade relations, Nr. 03/2008

Manuel Barroso, speech at the EU – China Business Summit, 6 October 2010, Speech/10/258, European Commission

Paola Subacchi, One currency, two systems: China's Renminbi strategy, Chatham House, briefing paper, October 2010

Paul R. Krugman, Maurice Obstfeld, International Economics, Theory and Policy, 6th edition, Boston, 2003

Thomas Kunze, Nicolae Ceaușescu. Eine Biographie, Ch. Links Verlag, 2009.

* * *, Council of the European Union, Brussels, 6 October 2010, 14577/10, PRESS [267]

* * *, European Commission, DG Trade, A Trade Strategy for EU2020.

* * *, Eurostat (New Cronos Database), EU – China trade statistics

* * *, International Affairs, Volume 87, Number 1

* * *, Pontifical Council for Justice and Peace, Towards reforming the international financial and monetary system in the context of global public authority, Libreria Editrice Vaticana, Città del Vaticano, 2011

SUSTAINABLE DEVELOPMENT MODEL IN THE CIRCULAR ECONOMY

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Abstract

The purpose of the article is to provide an overview of the approaches to the concept of circular economy and its forms of expression, to identify priorities for the transition to the circular economy, giving a perspective on the greatest opportunities for certain value chains.

The highlighting of the way in which the transition from the triple bottom line model to the triple top-type regenerative-circular model is realized is by identifying the key strategies, formulating the institutional and practical conditions for the sustainable development of the economy in its transition to the circular model. Also, a circular economy that aims to maintain the value of products, materials and resources for as long as possible, as well as significant waste reduction.

These strategies should encourage the transition to the circular economy, build a competitive edge and create value in harmony with the natural environment.

Keywords: circular economy, model, sustainable development

JEL classification: Q01, P27, Q57

Introduction

Linear economy, the dominant notion that governs production and consumption, must be replaced in its entirety by "positive development in which markets operate" in order to systematically ensure a more optimal operation at local and global level.

Circular economy requires a design or system that preserves as much as possible the added value of a product and eliminates waste. When a product ends its life cycle, it must be kept within the economy as a resource that can be used again productively creating additional value.

It is based on several specific approaches that revolve around a set of basic principles. To understand the concept, it is desired to establish the ideas of composition. The relevance of this approach is underlined by the fact that pan-national organizations (such as the World Economic Forum, 2016) have signed and adopted the interdisciplinary composition of the circular economy.

Description of the Problem

The first paper, in which the term Earth Economy, the Boulding (1966) describes the earth as a closed and circular system with a limited assimilation capacity. The author deduced from this that the economy and the environment should coexist in balance. He suggested the implementation of a cyclical ecological system instead of the wasteful linear economic model.

The linear open system can be transformed into a circular system when considering the relationship between resource use and waste residues.

The first law of thermodynamics argues that energy and total matter remain constant in a closed system. Thus, the amount of waste generated in any period should be equal to the amount of depleted resource. Capital goods can function as a temporary materialization of resources, but when consumed, they are transformed into waste into the environmental system. Energy can't be destroyed but can be converted or dissipated. However, due to stockpiles of natural resources embedded in capital goods, in practice, the relationship between resource use and waste at any time is more complicated.

In the open system, some of the waste can be re-transformed into resources. In this way, the economy becomes circular. However, not all waste is recycled - due to lost opportunities and partly due to basic physical laws - the second law of thermodynamics.

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The term entropy describes how matter and energy are organized; the more organized and uniform they are the less entropy is. However, as resources are extracted and circulated through the economy, their entropy increases. Even though this is particularly noticeable for fossil fuels that come into the atmosphere as CO2 molecules, entropy growth also applies to most metals.

The Circular Economy from the Perspective of the Environmental Economy

The circular economy from the perspective of the environmental economy is based on a principle of material equilibrium, which implies that all material flows must be taken into account, although they will be economic values, not physical flows. From this perspective, the environment can be recognized as fulfilling four fundamental economic functions of welfare:

(1) the values of satisfaction;
(2) a resource base for the economy;
(3) a container for waste streams;
(4) a life-saving system.

1) Satisfaction values (positive externalities) are those that the environment offers directly to man without interfering with the economic system;

2) Secondly, the environment provides a resource base that serves as a contribution to the economy, both in terms of renewable and non-renewable resources. More problems arise in case of non-regenerability (e.g. fossil fuels), where physical stock, by definition, will be exhausted because resources are introduced into the economic system. It is important, however, to understand that exhaustion is possible for both non-profitable and renewable resources;

3) Thirdly, the environment functions as a waste bin for residues of economic activity, whether emissions are in water, soil or soil. The environment has a certain assimilative capacity to receive waste from the economic system, but once the assimilation capacity is exceeded, the environmental damage begins to increase;

4) The environment functions as a life support system. This function recognizes the biological inherent nature of the environment and the fact that the function of sustaining life can be influenced by economic activities.

The four economic functions of the environment are mainly analytical categories. However, there are interactions between them, which require an improvement in the economic analysis of environment.

Sustainable Development Model in the Circular Economy

Circular economy is an innovative concept that illustrates different theoretical perspectives according to the viewing angle: at first glance, emphasis is placed on analyzing material flows and industrial ecology. Circularity in the practical sense illustrates both the beneficial aspects circumscribed to the development of a broad spectrum of innovative possibilities (through technological substitution or social complementarity, incremental or radical, through closed or open flows, by collaborating in the creation of new goods or services in a rational economic or psychological sense cognitive, centered on either the needs or the social condition of consumers), but also some specific paradoxes (the paradox of novelty, the productivity paradox, the organizational paradox, the paradox of information versus knowledge).

Moving from the "procurement, production, consumption and disposal" to a "reuse, repair, refurbishment and recycling" model requires creating a political framework conducive to the circular economy in countries that want to implement this model. There are several limitations and challenges in the concept of circular economy from the perspective of environmental sustainability. The six identified limits on thermodynamics, the definition of system boundaries and governance challenges and the management of material, inter-organizational and inter-sectoral energy flows relate to understanding the real impact of circular economy activities on the environment:

Thermodynamic limits - Cyclical systems consume resources and create waste and emissions;

Materials lost in the ecosystem are impossible to reuse, identification, collection and recovery require large amounts of energy. Therefore, complete recycling is impossible.

Spatial limits - problems are shifted throughout the life cycle of the product;

Circular economy is conceived as a global concept, but the lack of a body to monitor the transition has led to its implementation only at local and regional level.

Time Limits - The use of non-renewable short-term can build long-term renewable infrastructure;

Physical material flows create both short-term and long-term environmental impacts, and this should be taken into account when designing products that are refurbished, re-manufactured and recycled.

4) Limits imposed by economy - The efficiency of using existing material resources in the economy is enhanced by the re-use, remanufacturing and renovation of products, as well as by the conventional recycling of their raw material value.

5) Limits imposed by path dependence and blocking - the first technologies maintain their position on the market despite efficiency;

In the circular economy, the valorization of products obtained through refurbishment, remanufacturing and recycling will have to compete with these products obtained using the linear model, as well as well-established management models.

6) Governance and management limits - intra-organizational and intra-sectorial inter-organizational and intersectoral physical and material flows.

Some practical solutions to intra-organizational and intra-sectoral materials and energy, exists in the literature, where the system approach has been adopted to govern and manage physical flows.

Benefits of Circular Economy

Applying Circular Economy Principles has a wide range of tangible benefits that primarily use circular design in product categories.

For example, standardization, modularization, or embedded disassembly involves product design for access to quality and cheaper materials. Moreover, performance-based business models (for example, sharing) have already proven their worth in many sectors. In this respect, competence in the reverse flow cycle represents a potential competitive margin for enterprises, while the circular economy also opens employment opportunities, developing expertise in legal, mechanical, operational or cross-sectoral challenges.

The benefits of the circular economy include:

- Elimination of waste in the value chain - the quantifiable advantage of reducing systemic, direct material costs and reducing dependence on resources.
- Circular economy benefits organizations with operational and strategic advantages - means that by reducing the level of raw materials needed, the economy can save billions of dollars.
- Due to closed-loop processes, the economy becomes less exposed to material price fluctuations, and the flattening cost curve results in a more efficient use of resources in both value and volume.

Conclusions

The transition from the linear to the circular model requires fundamental changes in production and consumption systems. The current actions of stimulating and monitoring the transition focus primarily on materials.

Designing products in a way that allows recycling, reuse, repair, redistribution, restoration and renovation, extending the life cycle, and changing the role of products in the system will play an important role in the transition to the circular economy.

Although the linear economy is still dominant, emerging trends indicate that the role of products in society is changing. The transition from product-based business models to service-based models

requires well-developed governance mechanisms and funding, including incentives for innovation to turn these niche activities into current economic models.

Future Directions to Be Approached

The circular economy for most countries will still mean better management of the economic and social situations they face. Although the linear pattern of production and consumption of goods and services continues to dominate, maintaining a balance between environmental, economic and social objectives is essential for the transition to a sustainable circular pattern. Approaches to closing material loops in a circular economy are interpreted and developed differently from country to country.

The transmission and use of information on successful models in the domestic economy will form the basis for achieving the objectives of the cyclical economy in terms of competitiveness or employment.

Bibliography

Brennan, G., Tennant, M., Blomsma, F., (2015), Business and production solutions: closing the loop in. In: Kopnina, H., Shoreman-Ouimet, E. (Eds.), Sustainability: Key Issues. EarthScan. Routledge, pp. 219-239.

Cohen, M.J., (2006), Ecological modernization and its discontents: the American environmental movement's resistance to an innovation-driven future. Futures 38, pp. 528- 547.

Creswell, J.W., (1998), Qualitative Inquiry and Research Design Choosing Among Five Traditions. Sage Publications, Thousand Oaks.

Ehrenfeld, J.R., (2010), The roots of sustainability. Sloan Manag. Rev. 46, pp. 23-25.

Evans, S., Gregory, M., Ryan, C., Bergendahl, M., Tan, A., (2009), Towards a Sustainable Industrial System: with Recommendations for Education, Research, Industry and Policy.

Fetscherin, M., Heinrich, D., (2015), Consumer brand relationships research: a bibliometric citation meta-analysis. J. Bus. Res. 68, pp. 380-390.

Frey, B.S., Stutzer, A., (2001), Happiness and Economics: How the Economy and Institutions Affect Human Well-being. Princeton University Press, Princeton.

Garetti, M., Taisch, M., (2012), Sustainable manufacturing: trends and research challenges.Prod. Plan. Control 23, pp. 83-104.

Geissdoerfer, M., Bocken, N.M.P., Hultink, E.J., (2016a), Design thinking to enhance the sustainable business modelling process. J. Clean. Prod. 135, pp. 1218-1232.

Georgescu-Roegen, N., (1977), Inequality, limits and growth from a bioeconomic viewpoint. Rev. Soc. Econ. 35, pp. 361-375.

Ghisellini, P., Cialani, C., Ulgiati, S., (2016), A review on circular economy: the expected transition to a balanced interplay of environmental and economic systems. J. Clean. Prod, 114, pp. 11-32.

Govindan, K., Soleimani, H., Kannan, D., (2015), Reverse logistics and closed-loop supply chain: a comprehensive review to explore the future. Eur. J. Oper. Res. 240, pp. 603-626.

Lieder, M., Rashid, A., (2016), Towards circular economy implementation: a comprehensive review in context of manufacturing industry. J. Clean. Prod. 115, pp. 36-51.

Sachs, J., (2015), The Age of Sustainable Development. Columbia University Press.

Seliger, G., (2007), Sustainability in Manufacturing: Recovery of Resources in Product and Material Cycles. Springer, Berlin, Heidelberg.

Stindt, D., Sahamie, R., (2014), Review of research on closed loop supply chain management in the process industry. Flex. Serv. Manuf. J. 26, pp. 268-293.

Webster, K., (2015), The Circular Economy: a Wealth of Flows. Ellen MacArthur Foundation, Isle of Wight.

ASPECTS OF SUSTAINABILITY OF ENVIRONMENTAL COSTS

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Abstract

The transformations made to the quality of the environment require imperative searching and promoting solutions that ensure the stability of the environment and maintain the ecological balance, in accordance with the economic and social objectives of the modern society development.

Environmental factors considered essential may be hierarchized according to the potential impact of the economy on them. Future development alternatives will consider the role of these factors in the general level of country development. The hierarchy of the impact of economic development on the environment will be based on the main objective pursued, but consider the country-specific intermediate or country-specific objectives. At the same time, a time horizon and ways of supporting environmental factors will be established.

Keywords: sustainable, environment, cost, matrix, environmental cost assessment

JEL classification: Q52, Q53, Q56

Introduction

The transformations made to the quality of the environment require imperative searching and promoting solutions that ensure the stability of the environment and maintain the ecological balance, in accordance with the economic and social objectives of the modern society development.

Environmental factors considered essential may be hierarchized according to the potential impact of the economy on them. Future development alternatives will consider the role of these factors in the general level of country development. The hierarchy of the impact of economic development on the environment will be based on the main objective pursued, but consider the country-specific intermediate or country-specific objectives. At the same time, a time horizon and ways of supporting environmental factors will be established.

Given that, more and more often, emphasis is placed on the qualitative aspects of environmental factors, it is necessary to fully approach the problem based on the knowledge of reality. By generalizing and criticizing reality, a better grounding of development policy at country level can be achieved. To that end, account shall be taken of the full utilization of the country's potential in accordance with processes relating to the protection of the environment, the detection, elimination, mitigation or mitigation of those elements which stop or delay the development process. An essential role is also played by the discovery of national and international factors that can influence the development of a country.

Description of the Problem

Environmental cost is a universally accepted economic category and is that part of the uses that compensate for the consumption of means of production and labor, under technical, organizational and management conditions, to obtain an environmental service.

The content of the cost is related to the consumption of factors that have caused it and which, to be traced and highlighted, must have a meaningful expression. So, the cost is the value expression of all factors consumed to produce of environmental services and takes the form of the costs incurred by the environmental service manufacturer. In other words, at the basis of the costs are the living and

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materialized work-consumed, expressed in terms of value, consumption that takes the form of production and distribution costs incurred by the producers of specific environmental services.

Cost and expense notions should not be confused. To be more conclusive one can say that an expense is synonymous with a payment, representing a financial flow, and the factor that determines that an expense is a cost element is consumption. The expense may be simultaneous, post-consumer or prior to consumption. The difference between the two indicators is that the cost includes only the material and labor consumptions for a period (month, year), whereas the expenditures comprise the entire financial circuitry caused by the environmental actions.

The environmental costing information system aims to ensure information flows and prepare partners to attract funding to address environmental issues, as well as those actions that generate / manage relevant environmental information. Environmental information is needed to set priorities as a basis for decision-making and to ensure compliance with European standards. In addition, the transition to the market economy fundamentally changes the requirements of the public and private sectors for this kind of information: environmental information.

The information system for environmental costs reveals some deficiencies, such as:

- The information flows of the various institutions involved in environmental protection are not organized into a unitary system;

- Environmental information is unsatisfactory quantitative and qualitative at the level of economic agents;

- Inadequate training at the level of qualified personnel to manage relevant environmental information.

Environmental cost assessment

Minimum information is provided in this subchapter to estimate the costs of investments required to implement the PNM (National Environment Plan) measures. These costs will result from studies conducted for each investment. The purpose of the cost assessment is to estimate the economic consequences of the proposed investments to be made for the planning period.

Cost indicators

The most important indicators used to determine the costs associated with PNM (National Environment Plan) implementation are as follows:

• Total investment costs needed to provide waste infrastructure. These costs can be expressed as the total investment required (investment costs) or as an investment expressed annually to show the investment effort over a certain period;

• The annual cost of capital; the annual amortization of fixed capital and the associated interest for financing the investment. The annual cost of capital depends on the total investment, the number of years of depreciation and the associated financial costs (especially interest);

• Operating and maintenance costs; these costs are related to the operation of the installations in operation (e.g. energy, fuel, current repairs, etc.) but can also be influenced by measures that do not necessarily require investments or are less related to the costs of the investment eg separate collection of waste, minimization of transport routes, economic instruments, etc.);

• Administrative costs; implementation, authorization, monitoring and enforcement costs, strengthening administrative capacity;

• Annual total costs: include the cost of capital and operating and maintenance costs over a year;

• Unit costs: The cost of investment / waste management technologies is estimated by using unit costs (e.g. the cost of reducing one tone of biodegradable waste in a specific plant of a certain size).

Ensuring environmental costs

Supportability is understood as the ability of environmental service users to pay for these services without giving up on other basic needs. It is important to identify users' "payment capacity" to assess the economic supportability of environmental services (consumer solvency). A solvency indicator shows to what extent household income is sufficient to cover the growing costs of environmental services without prejudice to its ability to pay for basic needs. The problem of families unable to pay for environmental services is predominant in rural areas of a country.

Key milestones in estimating the costs of an environmental investment

To estimate the cost of an environmental investment, you need to go through the following main steps:

1. determining the necessary infrastructure to be built to meet the objectives and targets set by central / regional / local authorities;

2. Estimation of unit costs Adaptation to local conditions

3. estimation of investment costs and operating and maintenance costs;

4. estimating the payment capacity of the population living in the area;

5. Comparing the payment capacity with the estimated investment;

6. adjustments to the investment plan in order not to exceed the payment capacity.

At national level, increasing attention must be paid to:

• optimal surface allocation according to land use regulations (own production factor included in capital), property rights and social welfare criteria and sustainability of ecosystems;

• For developing cities, it is important to achieve not only a spatial order but also an optimal structure and size by integrating all criteria and interest groups, adding local preferences to these scenarios.

An important milestone in these processes is the evaluation of the various variants as well as the full cost assessment and then the comparison of the benefits and costs of the resulting alternatives.

Methodology

The common purpose of environmental costing methods is to highlight the magnitude of potential resource changes and, implicitly, the welfare of the owner of the good in monetary terms, which allows for integrated cost assessment, i.e., the comparison of alternatives.

Cost-benefit analysis is a traditional method of economical assessment of environmental (environmental, social, etc.) effects of investment projects. Cost-benefit means economic (economic-cost), environmental (ecological effects - affecting / improving the natural environment) and social. The analysis expresses change in the value of the good as a net economic value from one alternative or project alternative to another. The net economic value of an alternative represents the total increase in the good (benefit) which an alternative can determine which decreases the expected total decrease in value good (opportunity costs). This indicator is often found in the form of a report, the most efficient alternative to the one with the highest benefits compared to opportunity costs.

Environmental degradation refers to the degradation of the quality of environmental factors. The concrete measure of environmental factors depreciation is the change in the present value of the flow of environmental services, a problem of measuring these commercial values.

Summarizing the above, one can highlight the trend of development models for a region to capture the essence of sustainable development by promoting elements that sustain sustainability by considering the complete range of economic, environmental and social benefits and costs. In this regard, we can appreciate that the cost-benefit analysis mostly captures the current or optional environmental characteristics, as well as the preferences and availability of the population to pay

for certain ecological goods and services. The conclusions of these approaches show that effective implementation of the principles of sustainable development can only be achieved in certain regions that fulfill certain conditions.

Welfare means not only high income per capita but also an unpolluted environment. Account should also be taken of the process of integration into European structures, which requires the need to reconsider and change the role of industry in the economy, as well as increasing the importance to the environment.

Under conditions of developing Romania's economic links with EU countries where industrial competition has an important ecological component, it is necessary to adapt Romanian industry to these requirements.

In Romania, the sustainable development of environmental protection must become the central objective of all sectoral policies. This involves first identifying the positive or negative implications in the action areas and the institutional area. It is necessary to assess the real effects of a policy to cover the estimation of its economic, social and environmental impacts both in the region as well as outside it.

In this sense, the statistical information is complete and accurate.

The Environmental Cost Matrix

The paper aims at identifying sectoral interdependencies from the point of view of pollution in terms of environmental costs and investments and developing a mathematical model in which all links can be statistically determined and estimated.

The global and formal approach to the impact of economic activities, especially on the quality of environmental factors, can be achieved using the matrix instrument.

The matrix model of global environmental cost assessment

The matrix model of global environmental cost assessment considers the following categories of variables:

I. Factorial variables (VF) that highlight the economic sectors that generate the pollution that a country is confronted with, which are delimited in two categories:

1. Ambient variables, refer to the quality of the environment in the country:

The states of these variables are dual:

• N = the environment is unpolluted in the country (1)

• P = environment is polluted in the country (0)

2. Endogenous (VD) action variables that highlight the capabilities (qualities and abilities) of a country to adequately achieve environmental protection.

The states of this variable are dual:

• C = the country has the capability to carry out the investment activity (1)

• N = the country does not have the capability to carry out the investment activity (0)

The combination of the four states results in the following factorial states of a country:o aa = the country has a very good environmental and operational situation;

o ab = the country enjoys a favorable environmental situation, but it does not have the capacity to capitalize on the favorability of the environment, presenting a passive action situation;
o ba = the country has an unfavorable environmental situation, facing a polluted environment, provided it has the capacity to carry out the environmental investment activity, presenting an adequate action situation;

o bb = the country presents an unfavorable environmental situation (it is a polluted environment) and a contractile action situation.

Table 1

Combinations of the two factorial variables of the matrix model for assessing the cost of pollution

Act \ Ambient	a	b
1	aa	ab
0	ba	bb

Source : data processed by the authors

The four factorial states form the factorial state vector, VSF, whose elements are the factorial coefficients CF with values between 0 and 1, the sum of their values being 1:

Methodology and modeling of the model

The essence of the matrix model is the global and punctual relationship of the cost categories to the investment categories.

The following are the methodological steps of the matrix model construction, as well as the hypothetical operationalization of the model.

1). The estimation of the factorial coefficients, CF, for the determination of the vector of the factorial coefficients, VCF, in the case of the proposed model the values of the coefficients are hypothetical, the state vector, referring to the whole of the polluting activities, is presented in table 2.

Table 2

State vector, which targets all polluting activities

Factor states	aa	ab	ba	bb
Factorial coefficients	0,10	0,20	0,30	0,40

Source: data processed by the authors

$$\sum_{s=1}^{4} CF_s = 0{,}10 + 0{,}20 + 0{,}30 + 0{,}40 = 1$$

2). The environmental investment return matrix of the five sectors with pollutant activities is assessed in the four factorial states (table 3).

Table 3

The Return on Investment Environmental Matrix

Environmental status / Environmental costs	11	10	11	00
Industry	I11	I12	I13	I14
Agriculture	I21	I22	I23	I24
Transport	I31	I32	I33	I34
Housekeeping	I41	I42	I43	I44
Utilities	I51	I52	I53	I54

Source: data processed by the authors

Covering environmental costs involves the existence of financial sources. In this respect, five funding sources can be identified: state budget, local budgets, private funds and bank loans, post-accession funds - non-reimbursable funds, other external funds - repayable funds, external loans - repayable funds and other sources, participations).

Expected Results

The delimitation of sources of environmental risk financing is a key issue for decision-makers in their environmental protection policies (table 4).

Table 4

Environmental costs - environmental investments

Environmental investment/ Environmental costs	State Budgets	Local Budgets	Private funds and bank loans	Post-accession funds Non-reimbursable funds	External Loans (Reimbursable Funds)
Industry	C11	C12	C13	C14	C15
Agriculture	C21	C22	C23	C24	C25
Transport	C31	C32	C33	C34	C35
Housekeeping	C41	C42	C43	C44	C45
Utilities	C51	C52	C53	C54	C55

Source : data processed by the authors

Coefficient to cover pollution costs Cij = Xi / Yj

where: Xi = the sources of pollution; i = 1,2,3,4,5.
For i = 1 - source of pollution in industry;
i = 2 - source of pollution in agriculture;
i = 3 - source of pollution in transport;
i = 4 - source of pollution in utilities;
i = 5 - source of pollution in households.
Yj = financing needs by sources; j = 1,2,3,4,5.
For j = 1 - the source of funding is the state budget;
j = 2 - the source of funding is local budgets;
j = 3 - the source of funding is private funds and bank loans;
j = 4 - the funding source is the post-accession funds;
j = 5 - the financing source is external funds and loans.

Environmental costs C11, C22, C33, C44 and C55 are pollution costs for industry, agriculture, transport, household and utilities. The other Cij-type costs express pollution induced by sector I in sector j, expressed in cost, and Ii are the investments required by sector I to cover the cost of pollution.

Conclusions

The dynamization of this matrix can enable the evolving relationships to be highlighted, while offering the possibility of econometric treatment of the correlations and interdependencies between the factors, sources of risk and sources of financing of these risks.

The development of environmental protection at the country level in the sense of meeting the sustainability requirements raises the simple problem of reducing absolute and relative disparities between different areas and localities, highlighting the available resources and the economic and social vocation of each of them. This involves ensuring stable, simplified and appropriate implementation of the institutional and legislative framework, creating a favorable business environment for free local and foreign initiatives and investment, taking over the acquis community at the institutional, legislative and practical level, the healthy development of the internal market, to a minimum the speculative and damaging bureaucratic forms, generating instability, sudden changes and predictable incapacity.

To be sustainable today and in the future, environmental protection needs to operate at the highest levels of efficiency, competitiveness, productivity and profitability.

Future Directions to Be Approached

To be sustainable today and in the future, environmental protection needs to operate at the highest levels of efficiency, competitiveness, productivity and profitability.

In the practice of countries with experience in the field of environmental economic evidences, one way of expressing this link is through environmental cost.

Environmental costs are one of the many types of costs. Achieving environmental performance is one of the most important measures to be taken at national level.

Bibliography

Balmford, A, (2003), Globalvariationinterrestrialconservationcosts,conservation benefits, and unmet conservation needs. Proc Natl Acad Sci USA 100(3):1046–1050.

Vasile Burja, (2012), Environmental Management Systems And Companies‘ Sustainable Performance In Romania, Annales Universitatis Apulensis Series Oeconomica, Faculty of Sciences, "1 Decembrie 1918" University, Alba Iulia, vol. 1(14), pages 1-19.

Katherine Leanne Christ, Roger Burritt, Mohsen Varsei. (2016), Towards environmental management accounting for trade-offs. Sustainability Accounting, Management and Policy Journal 7:3, pages 428-448.

Jean-Francois Henri, Marc Journeault, Carl Brousseau. (2017), Eco-control change and environmental performance: a longitudinal perspective. Journal of Accounting & Organizational Change 13:2, pages 188-215.

Jean-François Henri, Olivier Boiral, Marie-Josée Roy. (2016), Strategic cost management and performance: The case of environmental costs. The British Accounting Review 48:2, pages 269-282.

Edeltraud Guenther, Jan Endrikat, Thomas W. Guenther. (2016), Environmental management control systems: a conceptualization and a review of the empirical evidence. Journal of Cleaner Production 136, pages 147-171.

Marc Journeault. (2016), The Influence of the Eco-Control Package on Environmental and Economic Performance: A Natural Resource-Based Approach. Journal of Management Accounting Research 28:2, pages 149-178.

Irene Eleonora Lisi. (2016), Determinants and Performance Effects of Social Performance Measurement Systems. Journal of Business Ethics 79.

Irene Eleonora Lisi. (2015), Translating environmental motivations into performance: The role of environmental performance measurement systems. Management Accounting Research 29, pages 27-44.

Rainer Lueg, Ronny Radlach. (2016), Managing sustainable development with management control systems: A literature review. European Management Journal 34:2, pages 158-171.

Emilio Passetti, Andrea Tenucci. (2016), Eco-efficiency measurement and the influence of organisational factors: evidence from large Italian companies. Journal of Cleaner Production 122, pages 228-239.

Emilio Passetti, Lino Cinquini, Alessandro Marelli, Andrea Tenucci. (2014), Sustainability accounting in action: Lights and shadows in the Italian context. The British Accounting Review 46:3, pages 295-308.

Neungruthai Nickie Petcharat, (2012), Towards a conceptual design for environmental and social cost identification and measurement system, Journal of Financial Reporting and Accounting, Emerald Group Publishing, vol. 10(1), pages 34-54, June.

CONCEPTUAL APPROACH TO REGIONAL COMPETITIVENESS IN ROMANIA

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Abstract

Approach to address the concept of regional competitiveness requires initially making a brief description of terms and general concepts necessary in the process of highlighting both the specific characteristics of regional competitiveness and the factors underlying it, given the fact that the Romanian economy characterized currently by the balance macro and micro-level voltages. Addressing regional competitiveness is a sneak peek among the characteristic elements of business performance presenting Romania 2012-2017. Based on these characteristics, the study addresses the indicators of regional competitiveness as inflation, GDP, employment rate of the population, changes in the minimum wage, debt and credit markets in domestic and foreign currencies and using available data shall review regional competitiveness for Romania.

Keywords: competitiveness, regional competitiveness, determinants of competitiveness, ways to measure competitiveness, regional competitiveness indicators

JEL classification: *R58*

Introduction

Long addressed microeconomic, macroeconomic and regional competitiveness is a matter of interest, the complex influence from the company and the industry and reaching aspects of location, has as main objective to achieve and remain competitive at different horizons time.

Economic integration and globalization are two aspects that need to be sustained and a rapid pace of development of competition in a country with increased importance of this dynamic and controversial competitiveness is influenced to a large extent the changes taking place at national and even global. Lately competitiveness is assessed by the ability to produce and sustain innovation by promoting the incentives for sustained economic growth and balanced.

The Romanian economy is characterized by stable macroeconomic and tensions at micro (Conference AAFBR, November 2014), which involves the development and implementation of economic policy capable of maintaining stable macroeconomic and adopt a set of fiscal measures drastic taxpayers , thus both equal competitive conditions and financial stability. FAPRI noted that microeconomic tensions rose due to uneven distribution of GDP.

For Romania, increasing competitiveness is the main method of recovering the differences compared with developed countries, given the fact that Romanian industry was affected by numerous structural changes and reforms, which still has an important role for the Romanian economy, being an element key in ensuring sustainable development.

1. Conceptual Approach to Regional Competitiveness

More generally, competitiveness can be defined as the ability of countries measured by comparison with other countries to train and provide economic, social, political and able to support the accelerated growth of added value. Another time defined on competitiveness is this competitiveness is the ability to obtain high productivity based on the efficient use of human, financial and material.

Competitiveness is the ability to create added value for those demanding and critical consumers who are willing to support higher prices for higher value they perceive. Here we recall the definition

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given by the OECD, namely: the ability of businesses, industries, industries, regions, nations and regions supranational provide inputs profits and levels of use relatively high on a sustainable basis, it exists and is exposed international competition. (Jordan, 2004)

Addressing competitiveness is the level that generates and maintains. Thus, competitiveness is generated at the micro level, and a country becomes competitive when it manages to build that environment that allows each company producing added value to become effective and be able to survive or grow in any economic environment, not only internally but also internationally.

Regional competitiveness shows that, although there are in each region and uncompetitive companies very competitive, there are certain common features within each area affecting the competitiveness of all firms located there involuntarily. These include, among others, physical and social infrastructure, qualified labor force and effectiveness of public institutions. In an economy increasingly more global, such factors can guarantee business success.

Over the last decade, competitiveness has been widely used, even if policy makers and Economic theorists have tried over the centuries to address a better understanding of the issues that are essential for improving economic welfare and distribution wealth of a country or region. Therefore, competitiveness is defined as the ability to coexist with other entities in circumstances of conflict of interest, here the focus is on each entity's ability to survive or grow.

In the EU context, the challenge is to live up to the ultimate objective of the Lisbon Council, which stated that the European Union becomes the knowledge economy, the most competitive and dynamic in the world, capable of sustainable economic growth with more jobs and with greater social cohesion. Context where the real challenge is the appropriate means of finding a long-term understanding of regional competitiveness and obtaining a perspective on decision makers.

Porter, tried to restrict the definition of competitiveness and productivity, considering it as the only element that determines the long-term standard of living of a nation and national income per capita. The author shows that the relationship between competitiveness and efficiency of international trade is strong and performing its structure causes a high level of competitiveness, caused in turn productivity.

Buckley, also highlighted that there is a relationship between competitiveness as a potential technology development effectiveness as measured by price-cost relationship, the performance measured by market share and profitable process including investment strategies, marketing strategies and customer proximity. It is an approach that folds neatly Romanian reality, however, competitiveness should be seen as a phenomenon it is important to identify optimal targets and resources, representing government funding and structural funds are allocated for the full objectives.

Addressing competitiveness as a process, particular attention should be paid to key areas for improving competitiveness, regardless of the level to which we refer, as no country can become competitive in all fields, but only those where reigns supreme, and the possibility of generate competitive advantages is the external environment of firms. So preserving local identity, regional or national, is an asset for registration of high levels of competitiveness.

The regional level is considered an intermediate level between the local and the national level involving the legal personality and the regional policies can address the needs of development thus achieving elimination of disparities between regions and to harmonious economic growth at the country level.

In economics, there are plenty of models that includes elements related to theoretical analysis of regional growth, located at the confluence of economic growth theories, locality, international trade and international movement of production factors and the theory of economic and monetary integration, as follows:

- ✓neoclassical growth models, are not given any role regional actors;
- ✓recent endogenous growth models and new economic geography are those who admit the existence of external economies of scale and scale enterprises internal territories;

- ✓analysis models of local productive systems and regional dynamics, are showing more pronounced socio-economic approach and combines several categories of external effects. (Popescu, 2005, p.448-451)
- ✓In conclusion they can identify several issues relevant to understanding regional competitiveness as follows: (Martin, 2003)
- ✓no single theoretical perspective able to capture the whole complexity of the concept of "regional competitiveness", there is only one set of three concepts that are quite different from each other;
- ✓in a sense, regional competitiveness has to do with a region's ability to generate sufficient levels of exports and productivity are important economic activities aimed at local and regional markets;
- ✓notion of regional competitiveness refers equally to the factors and conditions qualitative and quantifiable attributes and processes, with major implications in terms of empirical measurements and analysis of regional competitiveness;
- ✓a region's competitiveness lies both in its constituent competitiveness of individual firms and the interaction between them and the assets and attributes broader social, economic, institutional and government of the region itself;
- ✓sources of regional competitiveness may originate in a variety of "dimensions" geographical, from the local, regional, national and even international, although there is no natural unit predefined "regional" level which aspects of competitiveness to the better theorized or analyzed;
- ✓competitiveness causes are usually assigned an aggregate of factors rather than the impact of a single factor, which limits the isolation correlation coefficients.

2. Regional Competitiveness Indicators

Measuring regional competitiveness is an issue that creates different issues so that an industrial area does not compete with agricultural region unless it plans to improve state or obvious enter into cooperative relations with other regions and eventually they become more competitive, and gains are mutual. (Krugman, 1994)

From the point of view of specialists (Jula s.a., 1999; Jula si Jula, 1998) is difficult to build an aggregate indicator for measuring regional competitiveness based on elements defining reason to like the idea of result indicators and accepted concept that the competitiveness is defined as the ability to produce goods and services that meet the requirements of domestic and international markets, in other words, the capacity of regions, nations or geographic areas to generate as a result of international competition, income levels and employment relatively high.

Well there are numerous studies that calculated indicators of competitiveness, but most nationally as those compiled by the World Economic Forum and International Institute for Management Development, although there are studies of competitiveness at regional level, including fewer indicators than indicators of national competitiveness, such as those published by the Department of Trade and Industry in the UK, which publishes quarterly regional competitiveness indicators and the European Commission, but the statistical NUTS-2.

Thus, most of the indicators of such studies are very useful, some of them are difficult to interpret, especially GDP per capita which seems rather an outcome than a component factor of competitiveness and the same thing happens with unemployment. But it is not easy to choose what to include in an indicator of competitiveness because it is a concept vague and can not be measured directly, even if in reality core indicators for competitiveness are interrelated and causality is thus difficult to assess.

It can also work to distinguish between factors determining competitiveness and results, which is why two of the main questions that need to respond studies on regional competitiveness are:

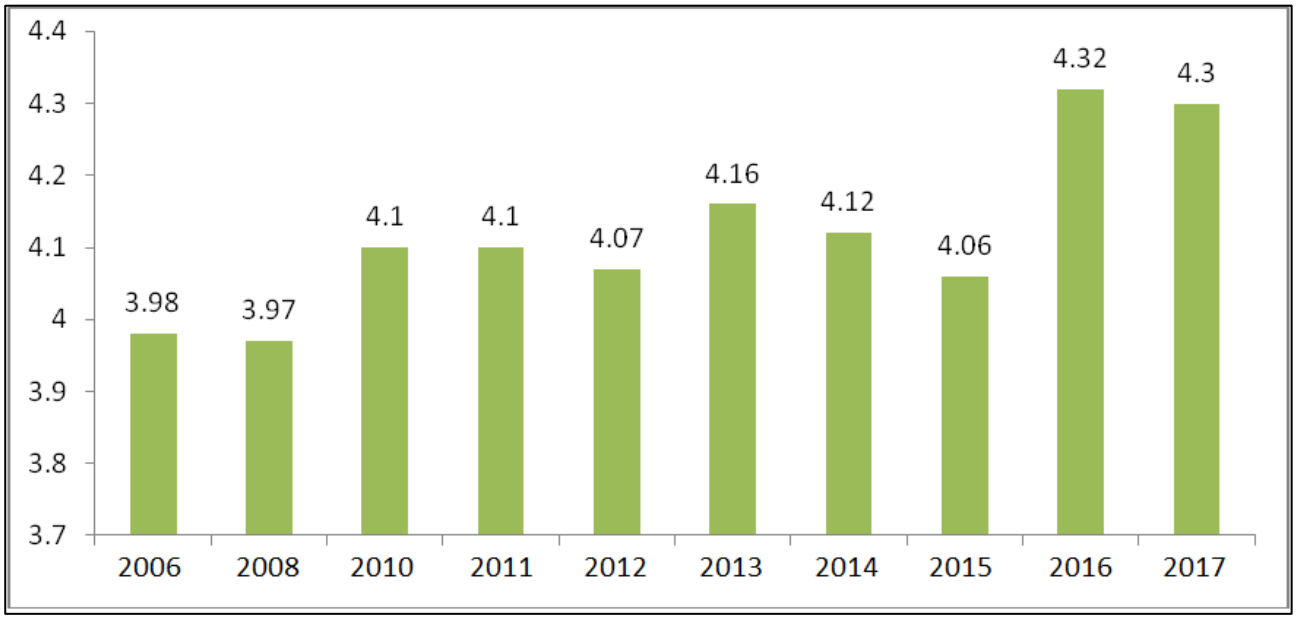
1) How can this be measured?

2) By what means can improve regional competitiveness of a region? (Vincze, 2003)

Then the answer to these systems can lead to construction of various indicators and models to assess the actual regional competitiveness and interconnections between regional competitiveness and national competitiveness and possibly the microeconomic level.

Analyzing the competitiveness index in Romania in the period, respectively 2007-2016, we see that there has been a historical forecast high and low short-term and long-term and that the score ranges on a scale of 1-7, resulting in a score environment high of 4.32 points, which means a higher degree of competitiveness and that a lower average score of 3.97 points which means a lower degree of competitiveness.

Figure 1 - Competitiveness index in Romania during 2007-2016



Source: Based on data from the Global Competitiveness Report during 2016-2017

3. Romania's Gross Domestic Product

Since 2012, Romania was the second lowest in the European Union after the GDP per capita, which was 16.310 USD, according to the World Bank followed by Bulgaria. According to the same international institutions, in 2012 the total GDP was 169.396 billion USD. Romania's economy went into recession in the third quarter of 2008, with GDP decreasing by 0.1%. Since then, GDP has decreased every quarter except for a slight increase of 0.1% from the third quarter of 2009. In 2009, Romania's economy recorded a decline of over 7%.

Table 1

GDP value

Year	GDP - billions RON	GDP - billions EUR	Growth %
2016	761,5	168,7	1,83
2015	711,1	159,1	1,71
2014	668,1	152,4	1,61
2013	637,5	140,6	1,53
2012	595,4	132	1,43

Source: National Statistics Institute data processing

According to estimates published by the European for Statistics (Eurostat), a significant advance of the 28 member states of the European Union registered Romania, which had an increase in GDP in the first quarter of 2017 compared to the same period in 2016 about 5.6%. In contrast, the

lowest growth for the period April to June 2017 were registered in Belgium 1.4%, Italy 1.5%, Finland and the United Kingdom with 1.7%.

In the second quarter of this year compared with the first quarter, Romania had the third highest growth in the EU of 1.6% after 2.3% Czech Republic and Sweden with 1.7%. GDP increased by 0.6% in the euro area and the European Union in the second quarter of 2017 compared with the previous quarter.

In the first quarter of 2017 GDP grew by 0.5% in both zones, but compared with the same quarter last year, the second quarter GDP increased by 2.2% in the euro area and 2.3% in the European Union, with 1.9% increases by 2.1% in the previous period.

4. Inflation in Romania

European Commission anticipates growth for 2017 of 4.4% of GDP, but the latest report of the European Commission, objecting that fiscal policy has again become cyclical and the deficit expands in violation fiscal framework that requires keeping in budget -a structural deficit of 1% of GDP.

Table 2

The inflation rate in Romania

Year	Consumer price indices - %	The inflation rate- %
2012	103,33	3,3
2013	103,98	4
2014	101,07	1,1
2015	99,41	-0,6
2016	98,45	-1,5

Source: National Statistics Institute

Inflation has been declining in recent years, which means that the average annual inflation was on a downward trend since 2012, due to lower oil prices worldwide and the consequent reduction of VAT rates for different categories products and services. In 2015, inflation turned negative after reducing the rate of VAT for all foods and soft drinks from 24% to 9% from 1 June, and recorded a low of -0.6% in the year ending 2016 an annual average of -1.5%.

Inflationary pressures were quite likely to increase in 2016 due to rapid growth in domestic demand and the minimum wage in May. Reduce the standard VAT rate by 4 percentage points since January 2016, still works in the opposite direction and average annual inflation is expected to remain negative.

5. Categories of Population

Analyzing the data in the table below we can conclude that:

- ✓in 2010, the employment rate of the population between 15 and 64 years Varta was 58.8% and the unemployment rate of 7.3%, while the occupancy rate Varta population between 20 and 64 years of It was 63.3%, a difference of 6.7 ppc to the threshold of 70% set in the Europe 2020 strategy;
- ✓in 2011, the employment rate of the population between 15 and 64 years Varta was 58.5% and the unemployment rate of 7.4%, while the employment rate of the population between 20 and 64 years Varta it was 62.8%, a difference of 7.2 ppc to the threshold of 70% set in the Europe 2020 strategy;
- ✓in 2012, the employment rate of the population between 15 and 64 years Varta was 59.5% and the unemployment rate of 7%, while the employment rate of the population between 20 and 64 years Varta was 63.8%, a difference of 6.2 ppc to the threshold of 70% set in the Europe 2020 strategy;

✓in 2013, the employment of the population between 15 and 64 years Varta was 59.7%, and the unemployment rate of 7.3%, while the rate for the population between 20 and 64 Varta it was 63.9%, a difference of 6.1 ppc to the threshold of 70% set in the Europe 2020 strategy;

✓in 2014, the occupancy rate Varta population between 15 and 64 years were 61%, and the unemployment rate of 6.8%, while the rate for the population between 20 and 64 Varta was 65.7%, a difference of 4.3 ppc to the threshold of 70% set in the Europe 2020 strategy;

✓in 2015, the employment of the population between 15 and 64 years Varta was 61.4%, up from 0.4 PPC 2014 and the unemployment rate of 6.8%, identical to the one in 2014 while the rate for the population between 20 and 64 Varta was 66%, pPC to a difference of 4 to 70% threshold set in the Europe 2020;

✓in 2016, the employment of the population between 15 and 64 years Varta was 61.6%, up from 0.2 PPC 2015 and the unemployment rate of 5.9%, while the rate of Varta employment of the population between 20 and 64 years was 66.3%, pPC to a difference of 3.7 compared to the threshold of 70% set out in Europe 2020;

✓in 2017, the second quarter, the occupancy rate Varta population between 15 and 64 years was 65.5%, increasing to 2016 and the unemployment rate was of 4.8%, while the occupancy rate Varta population between 20 and 64 years was 70.5%, exceeding by 0.5 ppc national target of 70% set in the Europe 2020 strategy;

Table 3

Categories of population

Year	2010	2011	2012	2013	2014	2015	2016	2017
Total population	21447	21384	21336	21286	-	-	-	-
Population 15 years and over	18200	18158	18134	18111	-	-	-	-
Active population	9965	9868	9964	9977	9243	9159	8978	9418
The inactive population aged 15 and over	8235	8290	8170	8134	-	-	-	-
Employed population	9240	9138	9263	9247	8614	8535	8449	8967
Unemployed	725	730	701	730	629	624	530	451
Employees	6062	6153	6230	6271	5850	6062	6201	6382
Other	3178	2985		2976	2764	2473	2248	2585
Industry	2397	2401	2443	2431	2276	2227	2300	-
Services	3520	3587	3594	3650	3396	3657	3707	--

Source: National Statistics Institute

6. Determinants of Regional Competitiveness

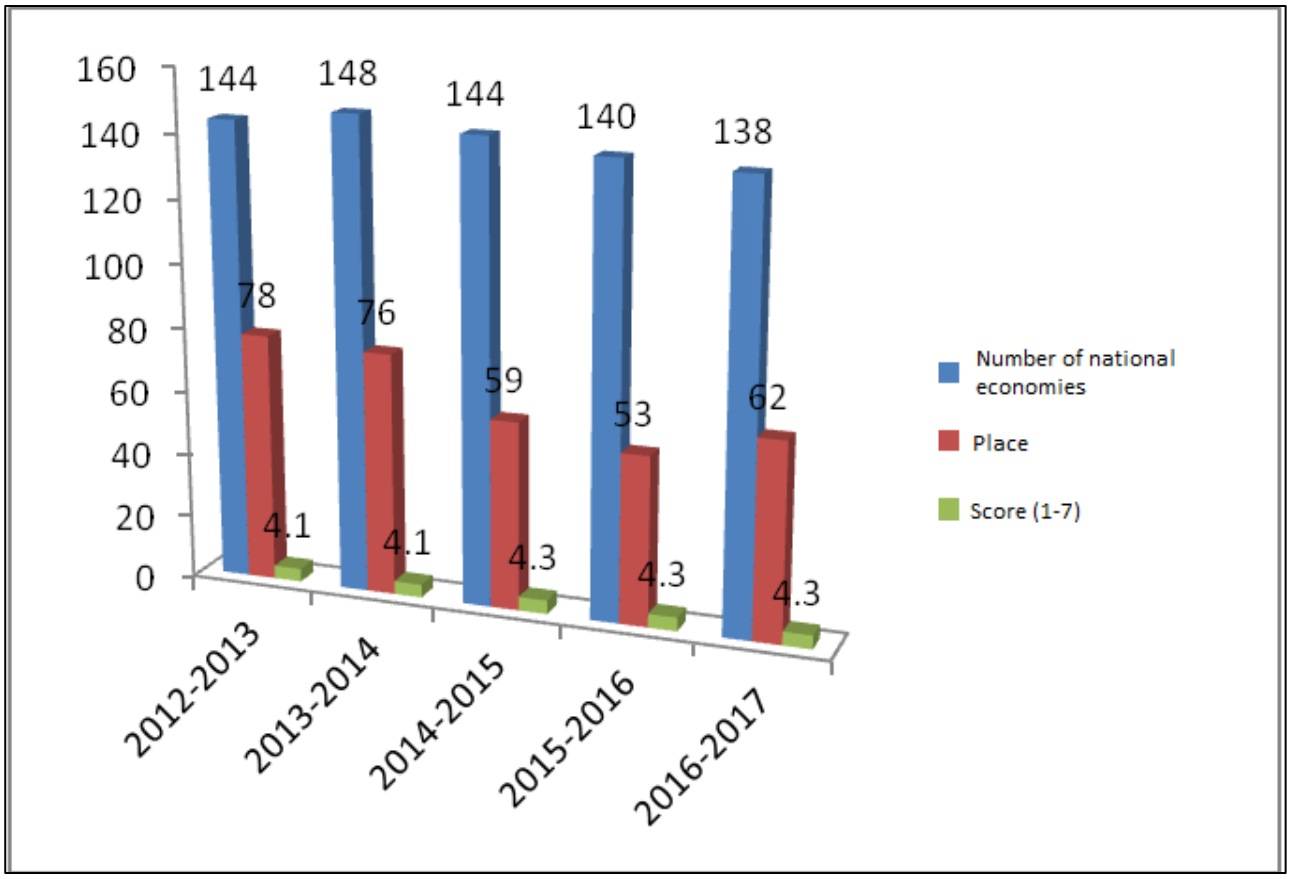
The Global Competitiveness Report are surprised determinants of increasing regional competitiveness even if recent developments such as Brex the changes in commodity prices and market volatility affects only insofar as they have a direct impact on the measurement data of these determinants on a scale of 1-7, where the top 140 economies in the period from 2015 to 2016, and changes since 2007.

Switzerland, Singapore and the United States remain the most competitive economies in the world, while Romania is ranked 62, posting 4.30 points in a global ranking of 138 economies made. The Global Competitiveness Report prepared by the World Economic Forum, edition 2016-2017, compared with 2015-2016 edition is noted that Romania is down nine positions from the previous year, when our country was located on 53rd registering 4.32 points, which highlights the refusal to open economies and more affecting the rhythm of competitiveness, growth and prosperity. On average, our country has 68.9 points in 2007-2016, reaching a peak of 78 points in 2013.

Before Romania are countries like Estonia located on the 30th, the Czech Republic ranked 31, Lithuania 35th, Poland on the 36th, Russia 43rd, 49th Latvia and Romania 51. Bulgaria which

ranks ahead of countries like Hungary but located 69th, Croatia 74th, Greece on 86th and Moldova which is located on 100th place.

Figure 2 – General Romania's performance



Source: Global Competitivenes Report

A solution that could compensate regional competitiveness is the state policies and regional policies by developing human resources and supporting entrepreneurship, generating pulses and initiating pro-development and circular cumulative development in the regions.

Among the most important components of these actions include: development of educational system, improving the quality of science teaching, developing legal system effectively, namely the formulation of legal regulations stable, fighting absolute corruption, development of administrative infrastructure allowing the use of Union funds European building ongoing relationships between universities and businesses in order to trigger the flow of human factor and technology transfer and initiating partnerships among authorities, businesses, universities, and local residents.

Resources and natural conditions that determine competitiveness refers to raw materials and the area that could be allocated to business activity, moreover, natural conditions and environmental quality which actually determines the competitiveness of tourism regions.

Technical infrastructure refers to a transmission system to a network of existing transport, telecommunications and energy infrastructure. Transport infrastructure should ensure linkages with national and international transport system.

Economic infrastructure refers mainly to the proximity of raw materials and components production, their suppliers in proximity to point of sale, financial institutions and consulting. Business is what determines regional competitiveness through regional banking network, by the presence of venture capital institutions through complicated procedures to apply for bank loans, the diversity of financial products by banks' ability to access investment projects of SMEs s, factors that influences the overall regional assessment of the quality and the competitiveness of the structural components. Another factor is also potential for local sales or value and character of demand issued by households and companies in its efforts to attract other companies to regions.

Social infrastructure for regional competitiveness refers to resources for housing, health, tourism and education infrastructure. Access to housing resources help increase regional competitiveness, increase the labor mobility, to ensure low-cost rental and purchase of real estate. Moreover, the increasing number of hospitals, clinics and pharmacies determines regional competitiveness. A developed infrastructure attract the region's population, provides facilities for recreation and leisure, cultural services that determine the competitiveness of regions.

Local authorities that are able to follow the pro-investment, or exemptions from municipal taxes for entrepreneurs shall implement pro-growth, can invest in infrastructure and transformation on their own, in order to improve living standards the region. The efficiency promotion measures and their power of reasoning, formal and informal links with state agencies and international organizations, and the ability to establish pro-regional lobbies seem to be important.

The pace of implementation of innovation is of major importance, especially if companies react quickly to whatever is new on the market and are able to meet the new requirements very quickly, which may result in a higher position opposite the competition and increase regional competitiveness. Economic situation of enterprises can be considered another factor of regional competitiveness at the micro level, given the fact that if their economic situation is better is better and regions, as they will benefit from funding opportunities to research, implementing pro-environmental investments and improving the lives of people.

Determinants of regional competitiveness bound people, mainly include: labor market mobility, population migration, professional qualifications of prospective and current employees. Population migration determines opportunities to find a new job, which is vital if we consider the size and quality of the local labor available and can purchase or rent an apartment.

Conclusions

Regarding the relationship between growth and development or poverty reduction is prevented in Romania economy underperforming expectations of the public on the working and living conditions, the financial insecurity of companies, the shares of tax evasion and corruption phenomena that cumulative They are found both companies and in the consolidated general budget.

All these actions were supported by the idea of a minimal state in Romania, which has not been able to impose itself through transparent institutions and strong to develop and implement strategies and economic and social policies, at the same time and the guarantor of their application whole in order to ensure public confidence.

It is imperative to start the process of strengthening the tax administration on distribution of human resources, implementing an effective means of control, to ensure the computerization specific as well as policy making economic and social conditions necessary to emphasize economic growth and poverty reduction of the population by streamline distribution of national income, a process which is currently characterized by irregularities and misconduct.

This will ensure the effective functioning of the state and its institutions only if they cooperate with ownership by every citizen.

Bibliography

Buckley, P.J., Pass, C.L., Prescott, K. (1988), „Measures of International Competitiveness: A Critical Survey”, Journal of Marketing Management, 4(2), p. 175-200

Porter, M. E., (2008), „Despre concurență”, Meteor Press, București

Krugman, P., (1994) „The Age of Diminished Expectation”, MTT Press, London

Popescu, D. I., (2005), Construcția Europeană. Chestiunea dezvoltării regionale: De la miza la acțiuni, Internațional Economic Conference „The Poverty- Richness Binome and the Integration of Romania into the European Union”, University „Lucian Blaga”, Sibiu, 20- 21 May 2005, Vol. I, Editura Universității „Lucian Blaga”, Sibiu

Jula, D. si Jula, N., (2000), „The Romanian Regions Competitiveness, 40th Congress of the European Regional Science Association'', Barcelona, Spain

Jula, D.; Ailenei, D.; Jula, N. Si Gârboveanu, A., (1999), „Economia dezvoltări'', Editura Viitorul Românesc, București

Jula, D. si Jula, N., (1998), „*Dinamica dezechilibrelor în dezvoltarea regionala*'', Oeconomica, nr. 3-4, SOREC, IRLI, București

Vincze, Maria, (2003), „*Regional Competitiveness in România*'', Universitatea Babes- Bolyai, Facultatea de Stiin_e Economice Cluj Napoca

Elena Pelinescu, Marioara Iordan, Mihaela Nona Chilian, Mihaela Simionescu, (2016), „*Competitivitate – Competitivitate Regională în România*'', Editura Universitară

http://www.wall-street.ro/articol/Economie/90572/

http://incomemagazine.ro/articles/

http://www.zf.ro/zf-utile/pib-ul-romaniei-evolutia-produsului-intern-brut-ins-8264863

http://www.wall-street.ro/articol/Economie/83883/BNR-Deficitul-de-cont-curent-ar-putea-spori-la-6-din-PIB-in-2010.html

http://www.mediafax.ro/economic/avansul-pib-in-2008-a-fost-de-7-1-4017902

http://www.bizcity.ro/stiri/ins-produsul-intern-brut-crestere-cu-6-in-2007-la-121-miliarde-euro.html?id=37152

http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/3cr/competitiveness.pdf

http://www.aafb.ro/conferinte-anuale/conferinta-anuala-aafbr-2014/

http://www.ec.europa.eu

http://www.fonduri-ue.ro

http://www.insse.ro

REGIONAL DEVELOPMENT CONCEPT

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Abstract

Regional development represents a key component for the progress of a Memeber State of the European Union. The regional developments must be realised through programmes and project financed by the European Union, by the Member State and by the local public authorities. The main objectiv of the regional development must be to reduce the social and economic disparities between the regions of Europe. The complexity character of the regional development policy is highlighted by the way how are integrated three priority objective of the EU: economic and social cohesion, extending the subsidiarity principle and sustainable development.

Keywords: regional development, Regional Operational Program, National Development Program

JEL classification: R58

Introduction

Regional development policy is an essential component of the reform process in Romania, mainly aimed at reducing economic and social imbalances accumulated, to prevent the emergence of new imbalances and support sustainable overall development of all regions of the country.

This policy was introduced in Romania in 1998. Until then, Romania has not formulated a clear policy of regional development, although governments have acted in this regard by various macro-economic and sectoral policies. Thus, there were specific programs to develop severely disadvantaged areas, such as the Apuseni Mountains, the Danube Delta counties of Botosani, Vaslui and Giurgiu.

With the advancement of reforms necessary for the transition to a functioning market economy and in the context of the requirements that Romania had to meet in order to join the European Union, has outlined the need for adoption by Romania of regional development policies and effective clear that important new element of the reform strategy, which would be beneficial not only for the less developed regions, but also for socio-economic development of the country in general.

Thus, between 1996 - 1998, the European Commission and the Romanian Government developed the PHARE program for regional development policy which had as objective, on the one hand, awareness-makers and the public on regional development in Romania, on the other party proposal of a regional development model own Romania, based on a detailed analysis of the existing situation and the specific historical and cultural framework.

In the following period, 1997 - 1998, administrative units organized at the county level were associated voluntarily outlining the proposed eight regions mentioned in the study saw the establishment of appropriate regional development agencies.

The legal framework of regional development began to formulate since 1998 when the Law no. 151/1998 (amended by Law no. 315/2004) on regional development in Romania, a law which defines the principles, goals, skills, instruments and institutions necessary to promote policy area. National and regional institutions were established under this Act, and in the period 1999 - 2000 was drafted the first National Development Plan (NDP).

The entire institutional and legal framework for development of regional policies are in constant improvement, so as to meet EU and Romanian specificity.

In December 2001, the Romanian government sent the European Commission "position paper" Chapter 21 on regional policy and coordination of structural instruments, including the main actions to be undertaken to integrate the legislative, institutional and programming, partnership,

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additionality and financial management. Based on this document, Chapter 21 was opened for negotiations in March 2002.

Description of the Problem

To join the EU, Romania had to adopt, implement and develop the acquis communautaire. This represents the primary and derived legislation and all policies and institutions created to enforce compliance and appropriate and continuous development of this legislation. Acquis communautaire comprises 31 chapters. Most of the acquis communautaire must be taken as such only concrete and difficult issues to be negotiated.

The Romanian Government approved in its meeting of 6 December 2001 position paper on **Chapter 21 - "Regional policy and coordination of structural instruments"** and opened negotiations in the first half of 2002, when the position paper related was officially EU Council.

This position paper reviews the progress achieved by Romania and the timing determinant processes continue in the field, on the following matters:

- **territorial organization**: the candidate must agree with the Commission on a NUTS classification for implementing the Structural Funds;

- **legislative framework**: although the acquis contained in Chapter 21 does not require transposition into national legislation, candidate countries must have an appropriate legal framework, enabling them to implement specific provisions in the field;

- **programming capacity**: Romania must:

a) prepare a development plan, according to the requirements of regulation no. 1260/1999 Council (National Development Plan);

b) have appropriate procedures for programming multi-annual expenditure;

c) ensure the implementation of the partnership principle in different stages of programming, financing, monitoring and evaluation of assistance from the Structural Funds;

d) meet the specific requirements for monitoring and evaluation, especially in the ex-ante evaluation of the development plan.

- Institutional framework: must be defined tasks and responsibilities of all bodies and institutions involved at regional and national level, in the preparation and implementation of Structural Funds and the Cohesion Fund and the institutional framework for the implementation of structural instruments;

- Financial and budgetary management: must be met control provisions specifically available for the Structural Funds and the Cohesion Fund. Moreover, Romania should provide information on its ability to co-finance and public expenditure or equivalent structural action.

According to the position paper, Romania accepts the acquis on regional policy in force on 31 December 2000.

Romania falls ITS development with all Regions, namely STI entire Territory to be eligible for Objective 1 of the Structural Funds. DECLARED ITS Participating interest in Romania, from Accession to the European Union in all Community Initiatives.

Romania wants to participate in economic and social cohesion of the Community and benefit from the full support given by the Structural Funds and the Cohesion Fund under the conditions applicable to the other Member States.

Romania will ensure the consistency of its policy of economic and social cohesion with other Community policies, particularly in the areas of employment, equality between men and women, social policy and training, policy development of small and medium-CAP , common fisheries policy, energy, transport and trans-European networks, application requirements for environmental protection, etc.

Methodology and Data Sources

The main instrument for achieving the Regional Development Plan is the National Development Plan (NDP). NDP is elaborated on the basis of sectoral planning documents made by line ministries and Regional Development Plans, conducted under the coordination of RDA's.

NDP provides, since 2000, substantiating our country demand for financing development programs of EU funds.

Since the planning document PHARE 2003 was introduced a new approach to programming PHARE funds for the period 2004-2006: the concept of multi-annual programming.

Romania is among the least developed in Europe. His long-term plan is to achieve steady economic growth, faster than the EU average, in the context of a balanced development of its territory, and in particular the reduction of disparities between rural and urban areas.

NDP aims at solving the major problems identified in the global socio-economic analysis, designed to progressively reduce disparities between Romania and the other Member States of the European Union, by simultaneously achieving the following objectives:

1. ensuring long-term revenue growth;

2. combating social and regional imbalances;

3. progressive compliance with environmental standards that Romania will have to meet.

Overall objective of the NDP were initially identified seven priorities, and then be selected and reduced to five:

Priority 1: increasing the competitiveness of the productive sector;

Priority 2: improving and developing transport and energy infrastructure and ensuring environmental protection;

Priority 3: Human resource development, increasing the employment rate and combating social exclusion;

Priority 4: diversification of the rural economy and increasing agricultural productivity;

Priority 5: promoting a balanced participation of all regions in Romania in the process of socio-economic development.

NDP includes an objective of regional development. This materialized in a regional operational program (ROP) which reflects the progress made in developing a regional development policy and in line with EU acquis, will seek wider devolution and subsidiarity principle. Under the supervision and coordination of the former Ministry of European Integration, acting in a management priority regional development policies and decision making processes which includes already the responsibility of local authorities (local infrastructure). It also includes activities that require a regional component to counter the inevitable regional disparities created through management policies at the central level exclusively.

To substantiate the NDP, regional plans were developed for regional development, which served mainly to identify and substantiate 5 of NDP priority "Promoting balanced participation of all regions of Romania in the process of socio - economic development". At the same time, the Regional Development Plans were used to identify measures within sectoral development priorities, so that they can contribute as much to the development of regional priorities, mainly related to increasing employment and suitability qualifications to labor market requirements improving transport infrastructure, energy and environmental protection. In this way, it has achieved greater than in previous versions of the NDP, correlation and complementarity between regional measures and priorities for regional development.

CDRs and RDAs must play a greater role in terms of programming, partnership, implementation and / or selection of projects at NUTS II level. Beyond the ability to perform analysis and develop regional plans for regional development will be encouraged regional partnership structures to achieve consensus on the priorities and regional development measures. Consensus is not easy to achieve, requiring effective involvement in the programming exercise of the various actors in each region.

According to the Commission's recommendations, the priorities included in the NDP 2004-2006 Operational Programme can be found in the NDP 2007-2013, under which Romania has negotiated framework Backed Community.

Results Obtained

Absorption capacity is the degree to which a country is able to spend effectively and efficiently the financial resources allocated from structural instruments. To achieve this requires, on the one hand, the absorption capacity of the institutional system created by the state to administer the funds in question and, on the other hand, the absorption capacity of the beneficiaries targeted by these funds. The latter is determined by the capacity of potential beneficiaries to create projects and to co-finance.

1. The absorption capacity of the institutional system

Absorption capacity is thus determined by three main factors, namely: macroeconomic capacity, administrative capacity (at system level institutions involved in the management of structural instruments) and financial and managerial capacity of beneficiary authorities.

a) Macroeconomic absorption capacity

It can be defined and measured in relation to GDP. Thus, the Council Regulation no. 1260/1999 provides that the annual amount of a Member State benefiting from the Structural Funds - together with assistance from the Cohesion Fund - should not exceed 4% of the annual GDP of each country. The Commission proposes to introduce a procedure to allow further involvement in the decision-making process.

Macroeconomic link capacity and the need to increase budget spending as a result of accession. There is thus a consensus regarding the need, since 2007, Romania ensure budget spending to 2% of GDP higher than today, expense arising strict obligations in the context of European integration: Romania's contribution to the EU budget European (about 1% of GDP) and the amount of national budget priorities and measures needed to be co-financed with EU funds - (still about 0.8 - 1% of GDP). All macroeconomic absorption capacity and ability to absorb keep macroeconomic effects generated by the additional expenses will be incurred.

b) The administrative capacity of absorption - the structures involved in the management of structural instruments

This refers to the ability of central and local authorities to prepare plans and programs in good time to sort out the best of them, organize a partnership framework effectively to respect and administrative burden of reporting and of finance and oversee the implementation process, avoiding any kind of irregularity.

If member countries in connection with the administration of structural instruments can consider three stages: design (which must be assessed by reference to the requirements resulting from regulations on structural instruments), operation (ie the extent to which the Structural Funds are managed effectively and efficiently) and performance (ie the extent to which structural instruments were administered effectively and efficiently).

Evaluation of the institutional structure:

Institutional management structure was defined structural instruments and received the endorsement of the European Commission during the accession negotiations on Chapter 21. By that created the Managing Authority for Community Support Framework (ACIS) which has taken the lead on overall preparedness of Romania to use structural instruments and the other Managing Authorities have taken up their duties can say that in general institutional structure is adequate in this regard there a proper administration.

Also it was performed designation of intermediate bodies, which are representative in their field. An intermediate body is involved in programming (in part), project selection and monitoring administration or possibly support to applicants, managing authorities delegating to them some responsibilities.

2. The absorption capacity of the beneficiary public authorities

a) Financial capacity:

Financial absorption capacity is the capacity of final beneficiaries to co-finance projects supported financially by the European Union, to plan and guarantee these contributions domestic budgets multi-annual and collect them from the various partners involved in a project or program.

The final beneficiaries whose absorption capacity is further analyzed local governments are the main beneficiaries because they are important for two operational programs: Sectoral Operational Programme Environment and the Regional Operational Programme.

One of the basic principles of cohesion policy is that of co-financing, which means that Member States must contribute financially, complementing Community assistance refundable, meaning reorient national spending to areas where results can be better in the medium and long At the same time, to develop a sense of belonging vis-a-vis the beneficiaries of the projects promoted.

Naturally, co-financing is the responsibility of the beneficiaries of Community assistance that will support part of the costs of drafting and execution of the projects proposed. First, beneficiaries must cover ineligible expenditure from its own resources within the proposed project.

To calculate how much money will be funding from the European Commission and how big the effort own co-financing of the Romanian side, at project level, is several steps, such as:

stage I - the elimination of ineligible expenditure

Not all costs within a project ready to be supported by the Cohesion Policy can be covered through structural instruments. Determination of eligible costs is not always easy. If the objective "European Territorial Cooperation", the list of eligible expenditure is set at the European Commission for the "Convergence" it is Romania's responsibility to establish its own system for eligible expenses, with only - the regime of exceptions - certain provisions of ineligibility for each background.

stage II: private expenditure deduction from eligible costs

Co-financing rate is determined solely from the eligible expenditure. If funded projects generate revenue, public expenditure is calculated net present value of the net revenue from the investment cost incurred during the period of reference.

stage III: application co-financing rate

For each operational program established a maximum rate of co-financing from the European Union. In this way, Romania has the freedom to fund certain priorities, measures and projects 100% of Community assistance, as long as the balance between different priorities and measures comply with the maximum rate overall operational program agreed with the European Commission.

The effort to co-finance it feels like pressure on local authorities (county councils, local councils), given that fiscal austerity is a reality at least in the medium term in Romania and allocations from the state budget will probably not to increase significantly in the coming years. Also guarantee loans of local government by the state would amount to an additional public debt and budget deficit would affect.

On the other hand, borrowing capacity is limited, both legally and following a low creditworthiness in the context of state guarantees limited. Therefore, the two main sources for co-financing projects are local government own revenues increased volume and accessing loans.

The share of own revenues in local budgets increased in recent years, mainly due to legislative changes which allow greater decentralization of the sources of budget revenues, local governments having control over the level of local taxes, set, where appropriate, by councils local or county. However, a large part of their income consists of income tax, whose level is regulated by central authorities. Often fiscal responsibilities transferred to the local level remain outside the regulatory powers of local government, which translates into a low degree of predictability of these sources of incomes.

Loans can be aimed at both co-financing and pre-financing of structural instruments and possibly the state budget allocations for projects financed by the Structural Funds.

Conclusions

Romania's participation in the implementation of EU regional policy means first opportunity to benefit from a system of values among which are found economic efficiency, environmental protection, ensure standards existential minimum definition of a "role model European" urban values, qualified human resources. At the same time, European integration and openness to the EU internal market involves the challenge of enhanced competitiveness, which can have negative effects on an economy in process of consolidation, as Romania.

In this context, the Structural Instruments is the most important resource that will help Romania to cope with change and integration challenges.

However, regional development policy can not constitute the only key to the overall development of a country, especially given that its real effects on growth are difficult to assess. A critical dimension of this is represented by the nature of the economic system and other quality policy mix that forms the essence of a state economic policy: the legal protection of property rights and market economy, taxation, antitrust, etc. Independent regional policy choices that a country / region they adopt according to its specifics, find the "mix" of policies to ensure optimal development is a challenge and almost always an extremely controversial topic. Development stage of Romania currently required using a policy mix without choose one alternative only: you can not only watch competitiveness, without avoiding the danger to enhance socio-economic disparities to the point where they can turn into explosions and serious social phenomena. Also, we can not choose any scenario allocation of funds without taking into account development potential, existing human resources and qualification of their economic resources, management, etc.

An economic policy is not good or bad, it is just not appropriate or the timing or the occurrence or condition for which it is applied. Therefore sometimes it is necessary to apply a policy mix that through a conjugate effect to redress many problems to determine the necessary impetus to economic growth. Thus, the screenplay "pro-development" is not an alternative exclusive opted for Romania for the programming period 2007 - 2013, taking into account the fact that the Structural Funds are public funds, aimed at ensuring economic, social and territorial states EU and one of the basic principles of the role of these funds aimed to counter the negative effects of the market economy.

In Romania, for the period 2007 - 2013 does not operate a regional policy itself, but an adapted version of it, a compromise based on the specific conditions of our country in terms of legislative, institutional and capacity to manage - with all the senses it assumed this responsibility from programming to implementation, monitoring and evaluation at regional level.

Future Directions to Be Approached

Determinants of regional development

Ways of measuring regional competitiveness

Regional competitiveness indicators

Bibliography

* * *, Law no. 151/1998 on regional development in Romania, with subsequent amendments;

* * *, Government Emergency Ordinance no. 28 / 04.10.2013 for the approval of the National Programme for Local Development;

* * *, http://www.inforegio.ro/ro/;

* * *, http://www.clr.ro/menu1/Capitolenegociere/CAP21-DP.pdf.

THE ROLE OF FDI IN THE ROMANIAN ECONOMIC GROWTH

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Abstract

Considering the role that FDI might play in achieving sustainable economic growth, the main aim of this paper is to check if FDI was a driver of economic growth in Romania after 2008, the beginning of global economic crisis. The results based on Bayesian estimations indicated that FDI did not generate economic growth in Romania in the period 2008-2015. This result might be explained by the context of economic crisis and the massive profits repatriation.

Keywords: FDI, economic growth, sustainable development

JEL Classification: C51, C53

Introduction

Foreign investment is a component of international flows that reveals the purpose of a foreign entity in a state (the direct investor). Foreign direct investment (FDI) is a component of the open international economic system, which, according to the OECD, is a major stimulus for development, which stimulates intense global competition to attract foreign capital. Host countries are interested in creating a stable, predictable and transparent investment policy environment.

Any investor wishing to choose a particular country to invest is interested in the level of taxation, but also in the attractiveness of the local business environment. With regard to taxation, it is easier to make a decision based on the analysis of existing legislation, but the final decision must also take into account the business environment, its predictability and stability, and the level of corruption. The World Bank Doing Business report (2016) calculates the indicators that measure the predictability of the business environment. The report of 25 October 2016 shows that Romania ranks 36th out of 190 countries with changes that made it more difficult to do business by increasing the time required for VAT registration. The report considers a number of criteria related to the ease of starting a business, obtaining construction permission, ownership registration and access to electricity. However, this World Bank report does not also address corruption, macroeconomic stability and security.

The main purpose of attracting FDI in a particular country is economic growth and all the benefits that arise from its achievement. In general, foreign direct investment is considered to be a driver of economic growth as a step forward in achieving sustainable development goals.

As a driver of economic growth, FDI is a complement to domestic investment and is classified as non-external debt generating financial flow. Moreover, foreign direct investment significantly finances the current account deficit. Compared to other sources of capital, foreign direct investment is preferred, especially if it is considered that repatriation of profits, as capital outflows, depends on the economic results obtained. These economic outcomes are linked both to the private interest of the investor and to the interest of the host country in terms of economic growth. In the recent theory of economic growth, the factors that ensure long-term economic growth are presented. Thus, in the local economy, FDI brings indirect advantages, such as technological externalities, encouraging human capital formation or access to foreign markets.

The growth rate of GDP is an indicator of the potential of a market. For foreign investors in transition countries in Central and Eastern Europe, GDP growth is an important milestone, as many authors have shown, including Tondel (2001), Garibaldi et al. (2001), Addison and Heshmati (2003), Busse and Hefeker (2007), Dang (2009), Bockem and Tuschke (2010). In this context, this paper examines the influence of FDI on GDP growth in Romania in the years after the global economic and financial crisis started in 2007.

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The Analysis of FDI in Romania

Romania has moved from a marginal position in Central and South-Eastern Europe for attracting FDI to a very good position, achieved in 2006-2008. The expansion of foreign investment has been stopped by the global economic crisis, with FDI declining considerably in Romania.

During 1991-1996, a large number of foreign investors arrived in Romania, most foreign investors from Central and Eastern Europe. However, although many, the investors were small, being encouraged by the very permissive legislation and the ease with which privatization was achieved, but also by an acceptable level of bureaucracy. Thus, at the end of 2005, the foreign direct investment balance was $ 417 million (BNR Raport anual 1998).

In the next period (1997-2000) the great legislative and institutional instability discouraged investors, despite a fairly large privatization offer. At the beginning of this period, there were still large inflows of FDI, but then they fell a lot. In 2000, the share of foreign investments in GDP was 2.9% compared to 10.8% in Slovakia and 9.3% in the Czech Republic (BNR, 2000, p.10).

The period 2001-2004 was a period of economic development for Romania, but the attitude towards foreign investors was quite neutral, although privatization was greatly accelerated. During this period, should be recalled the massive privatizations in the field of oil exploitation and distribution and in the banking system (the privatization of the Romanian Commercial Bank, Petrom, energy investments). It is the time when Romania prepared for EU accession and had to meet the Copenhagen criteria, as Dăianu (2001) pointed out, by establishing a functioning market economy that would withstand competition and market pressure within EU. At the end of 2004, the foreign direct investment balance reached EUR 15040 million, of which 80% was as shareholdings, with 53.8% of the total being attracted by industry (NBR, 2004).

In 2005-2008, Romania has reached a record level of FDI inflows by stepping up privatization amid increased investor confidence and EU integration. In 2008, Romania was the tenth country of the EU-27 in terms of the size of the FDI attracted, reaching the maximum level of the period. It was a period of economic growth for Romania. In 2005, the FDI balance was EUR 21885 million, of which 42.2% represented investments in greenfield activities with more than 50 employees, and this year's net foreign investment was EUR 5213 million, out of which 22.3% was reinvested profit and 51.6% foreign investors' equity (BNR, 2006, p.2-3). In 2008, the FDI balance almost doubled compared to 2005 to EUR 48798 million, of which 41.3% in industry and 20.5% in financial brokerage and insurance. Over 71.5% of this final balance was represented by shareholdings in social capital, including reinvested profit, while net capital inflows reached a record high of EUR 9496 million (BNR-INS, 2009, Raport 2008).

In Romania, the effects of the global economic crisis had a delay of 6-8 months compared to Western Europe. After 2009, a considerable fall in FDI has also been observed in our country. Since serious austerity measures were implemented, in 2009 Romania had 60% less FDI than in 2008. The minimum level of FDI for 2009-2015 was reached in 2011, when the FDI net inflow was 1815 million, out of which 83.3% net shareholdings in social capital, the balance being of EUR 55139 million, still higher by 4.9% compared to 2010, due to revaluations due to the change in the exchange rate and the price of some assets, but also to accounting repricing (BNR, 2012, p.7-8). A slight increase over the previous year was observed in 2012 and then in 2013, but in 2014 the FDI again fell compared to 2013. According to the National Bank of Romania (2017), at the end of 2016, the FDI balance was EUR 70113 million, of which 44.2% in industry and 14% in construction and real estate transactions. The contribution of FDI to exports of goods was 74%.

Literature Review

The literature highlighted a positive link between FDI and exports. FDI generates exports growth, which contributes positively to economic growth.

Blomstrom (1994) considers that FDI has positive effects on economic growth as they are related to income levels. Under a certain level of income, these positive effects are canceled. Only countries with a certain level of income have the capacity to absorb new technologies and only those benefit from the positive effects of FDI. The quality of human resources greatly influences

the absorption capacity of new technologies. A major influence on the way in which new technologies are absorbed is mainly the quality of the workforce.

Lipsey (2002) does not deny the positive effects of FDI on economic growth but shows that there is no stable link between economic growth and the size of the FDI stock. The causal link between the two variables was also studied by Chowdhury and Mavrotas (2005) for three economically developing countries (Malaysia, Chile and Thailand). In Chile, economic growth is the one that attracts FDI. In contrast, in the other two countries the relationship is bidirectional (FDI generates economic growth but also consistent economic growth attracts more FDI). So, there are peculiarities of each economy, which influence the attraction of FDI.

Although FDI has a positive influence on the economic growth of the host country, Bengoa and Sanchez-Robles (2003) have shown that liberalized markets, economic stability and trained human capital are also needed to keep these positive effects of FDI in the long term. The same idea is reiterated by Alfaro (2003), which considers that host countries need fairly developed financial markets.

The literature offers contradictory results that cannot be generalized. Therefore, the assumption that FDI has a positive impact on economic growth is only verified for certain countries or regions. For some countries, GDP was an important factor in attracting FDI, as Garibaldi et al. (2002), Bevan and Estrin (2000), Globerman and Shapiro (2002), Bevan et al. (2004), Benassy-Quéré et al. (2007); Bellak et al. (2007), Hansson and Olofsdotter (2010).

Some studies for Romania highlight the strong effect of FDI on the economic environment. Ulian et al. (2014) show that FDI had a positive and strong impact on economic growth in Romania and the Republic of Moldova between 2006 and 2012 based on a simple linear regression. Nistor (2012) showed that there is a positive correlation between GDP per capita and FDI stocks at the level of Romania's regions. In the North-East region, there is the lowest FDI stock but also the lowest GDP per capita. Based on other methods, Roman and Padureanu (2011) showed for Romania a positive effect of FDI on economic growth. The authors used a neoclassical model with Cobb-Douglas type production functions. Pelineascu and Rădulescu (2009) showed that FDI had a positive and rather weak impact on economic growth during first quarter 2000 - first quarter 2009. According to Rădulescu and Pelinescu (2010), FDI has a positive impact on re-specialization in transition economies, increasing the level of exports and modernizing production.

In other studies, empirical evidence shows a weak influence of economic growth on FDI. For Romania, Ludoşean (2012) built a VAR model and showed based on Granger's causality test that FDI does not generate economic growth. On the other hand, the author has shown that greater economic growth attracts more foreign investors to Romania. The same conclusions regarding the relationship between FDI and GDP in Romania were obtained by Carp and Popa (2013). Based on a VAR model for 1990-2011, it was obtained that GDP is the factor determining FDI flows in Bulgaria and Romania.

Based on a simple linear regression model, Moraru (2013) explained GDP based on foreign direct investment over the period 2003-2011. However, the time series is very short and the result has to be looked at with much reserve. Popovici et. al (2014) analyzed the evolution of the investment flow in the period 1990-2013 based on a mobile average model and a VAR model, with a 1.06% change in the FDI explained by the GDP changes in this period.

Presentation of Models and Results

This paper studies the relationship between FDI and economic growth only during the economic and financial crisis and after it. No study in the literature has proposed an econometric model to analyze the relationship between FDI and economic growth in Romania only in the years after the global economic crisis. As a novelty for Romanian economic literature, the analysis used Bayesian estimation methods, which solve the problem of a small set of data for a short period of time, such as an economic crisis. The prior information is combined with the sample data and posterior values were obtained for the coefficients of the linear regression model.

For Romania, it was considered that during the economic crisis, with a high economic instability, foreign investors are not attracted, not even by GDP growth. On the other hand, FDI is unlikely to

generate economic growth during economic recession. These economic considerations provide enough clues to consider a prior distribution of normal-type coefficients for which the average of the normal distribution is null. In this context, two Bayesian linear models will be constructed to explain FDI on the basis of the real GDP rate and also the real economic growth based on FDI.

Although in Romania the effects of the global crisis have been felt only since 2009, this analysis will cover the period 2008-2015, to include the moment the global crisis started. For the real GDP rate in 2015, the GDP value of the first three quarters of 2015 was considered.

For the real GDP rate (%), the Eurostat database was used, and FDI as a percentage of GDP was taken from the World Bank database.

In the case of the Bayesian linear models, the likelihood function was considered to be a variance equal to 1 and for the model coefficients (the free term and the slope of the regression line) was considered prior distribution of normal type with mean 0 and variance 1. In other words, prior information tells that neither FDI has influenced at all economic growth in Romania, nor GDP growth has attracted more foreign investors in our country. This hypothesis is plausible as the relationship between the two variables is studied only during the economic crisis, and, as already shown, it is known that FDI is diminishing due to reduced economic stability and GDP has, on average, a tendency to decrease.

The estimation algorithm, implemented in Stata 14 software, was Metropolis-Hasting algorithm. A number of 12500 iterations were used, of which 2500 were used in the model's adaptation process, and the remaining 10000 iterations were used in the actual estimation process. The results of the first model are presented in table 1.

Table 1

Bayesian linear regression model for explaining FDI evolution (% of GDP) in Romania during 2008-2015

Coefficient	Posterior mean	Posterior standard deviation	Confidence interval for coefficient (at 5% level of significance)	
Coefficient for real GDP rate	0.1950518	0.0874561	0.0212291	0.3599137
Constant	1.966591	0.3717643	1.2389919	2.704845

Source: own estimations

The data in table 1 show that in Romania the increase in the real GDP rate has positively influenced the attraction of FDI starting with 2008. As real GDP rate increases one percentage point, FDI as a percentage of GDP increased on average, by 0.19 percentage points.

Table 2 presents the results of the model explaining the relationship between economic growth and FDI in Romania.

Table 2

Bayesian linear regression model for explaining real economic growth in Romania during 2008-2015

Coefficient	Posterior mean	Posterior standard deviation	Confidence interval for coefficient (at 5% level of significance)	
Coefficient for FDI	-0.022353	1.031667	-1.977393	2.011686
Constant	-0.0015886	1.04477	-2.058073	1.983908

Source: own estimations

In Romania, the results of the Bayesian estimates have, contrary to expectations, indicated that an increase in the inflow of FDI did not generate economic growth. The real GDP rate decreased on

average by 0.02 percentage points when FDI increased by one percentage point for 2008-2015. There are several possible explanations for the fact that FDI did not lead to economic growth during this period. First, the model was only estimated for the post-global economic crisis. As Zaman et al. (2010) have shown, the economic crisis has negatively influenced FDI flows in Romania, although initially it was considered that joining the European Union and post-accession could function as a shock absorber for external shocks, bringing additional economic growth. Another explanation is that after a period of continuous FDI growth, they reach a saturation period and begin to decline. Between 2005 and 2008, FDI rose sharply in Romania, reaching EUR 9.5 million in 2008, only to decrease by EUR 3.5 million in 2009 compared to 2008. On the other hand, the negative balance on the side of revenues was determined by the increasing transfer of a substantial part of foreign investors' profits out of Romania. Thus, repatriation of profits to parent companies negatively influences economic growth in the host country. According to UNCTAD, profits reinvested by firms with FDI are much lower than the profit reinvested by them. According to Zaman et al. (2010), globally, the reinvested profits at the level of the host country are up to 3 times lower than the repatriated earnings. So, these companies only pursue their own interests and the high volatility of FDI is not exclusively due to insolvency or bankruptcy, but to the search for higher earnings in other host states where higher competitive advantages have been identified.

Many of the companies privatized and taken over by foreign investors experienced losses during the crisis. It is well known that foreign investors who do not recover their expenses declare bankruptcy much easier. If the company is also in a strategic field, such as the air transport, rail or postal services sectors, the entire national economy is a destabilized. In the case of companies of strategic importance for society, but also for the economy, during the economic crisis Romania did not implement the formula "too big to fail" frequently adopted by the developed countries. In other words, companies of strategic importance that have suffered heavy losses in the years of the economic crisis were not supported and the state of bankruptcy was preferred.

The results for this period are consistent with those obtained so far in the literature (Carp and Popa, 2013) over a longer period, from 1990 to 2011. The difference is due to the fact that estimation Bayesian techniques are not used and the period covered is much longer. So, it can be concluded that after the start of the recent economic crisis, the causal relationship between FDI and economic growth has not changed. An increase in GDP in Romania, from one year to another, attracts more foreign investors, but the influence is still very small. Some examples may explain this trend identified in Romania. According to a report released by Ernst & Young in 2012, foreign firms are interested in higher growth rates in emerging countries, with GDP stagnating in advanced economies. According to a 2014 report by Jones Lang LaSall, foreign real estate investors were interested in the evolution of macroeconomic indicators in Romania, including GDP. Greater economic growth has attracted more foreign investors on the real estate market.

It can be noticed that the results obtained based on the analysis of the econometric estimates are consistent with the statistical analysis presented and with the numerous failures in Romania of large companies such as Coca-Cola, Kraft, Nestlé, Nokia, Tnuva and ING Asigurari. In this context, Romania needs to take concrete measures to stimulate the attraction of FDI. A policy mix is recommended at the heart of FDI attraction, especially in sectors that could bring high added value.

Conclusions

It can be concluded that FDI plays an important role in the economic development of the host country by being able to encourage economic growth and generate a higher standard of living through the creation of new jobs. These advantages are particularly noticeable for developing countries, transition and emerging countries. In Romania, positive effects of FDI on economic development were observed during 2005-2008.

Empirical studies have shown that FDI does not generate economic growth in Romania, but Romania's higher GDP attracts more foreign investors. It is a clear indication that FDI in Romania did not bring significant positive effects on the economy.

The *results* obtained for Romania in 2008-2015 indicated that FDI was not a factor of economic growth during the economic crisis. On the other hand, GDP growth from one year to the next encouraged foreign investors, but the influence was not too strong.

Research *limitations* are related to the applied method, which is based on simulations. Because the estimates are done only by selecting certain samples, while others are not taken into account, the estimates are slightly shifted compared to the exact values. Moreover, a Bayesian econometric model is useful to explain FDI based on several determinants, not just economic growth.

Prin urmare, *continuarea cercetării* va viza identificarea determinanţilor ISD şi a impactului acestora pe baza analizei Bayesiene. Printre variabilele explicative, se pot considera: cursul de schimb, rata inflaţiei, rata şomajului, rata dobânzii, oferta de monedă şi gradul de deschidere al economiei.

Consequently, *future research* using Bayesian analysis is needed to identify the determinants of FDI and their impact. Among the explanatory variables could be considered: exchange rate, inflation rate, unemployment rate, interest rate, money supply and degree of opening of the economy.

References

Addison, T, Heshmati, A. (2003), The New Global Determinants of FDI Flows to Developing Countries The Importance of ICT and Democratization, Discussion Paper No. 2003/45, World Institute for Development Economic Research (UNU-WIDER) Helsinki.

Ashford, L. S. (1995), New perspectives on population: lessons from Cairo, Population Buletin, 1995 Mar.; 50(1):1-44.

Bellak, C., Leibrecht M., Damijan J. (2007), Infrastructure endowment and corporate income taxes as determinants of Foreign Direct Investment in Central and Eastern European Countries, LICOS Discussion Paper Series, Discussion Paper 193/2007, Belgium.

Bevan, A., Estrin, S., Meyer, K., (2004), Foreign investment location and institutional development in transition economies, International Business Review no 13, pp. 43–64.

Bevan, A.A., Estrin S. (2000), The Determinants of Foreign Direct Investment in Transition Economies, William Davidson Institute Working Paper, p.342.

Blomstrom M., Lipsey, R.E and Zejan, M., (1996), Is Fixed Investment the Key to Economic Growth?, Quarterly Journal of Economics, No. 111, pp. 269-276.

Böckem, S., Tuschke, A., (2010), A Tale of Two Theories: Foreign Direct Investment Decisions from the Perspectives of Economic and Institutional Theory, Schmalenbach Business Review, Vol. 62, pp. 260-290

Bonciu F., (2011), Investitiile straine directe inainte si dupa criza economica mondiala, Editura Universitara, Bucureşti.

Bonciu F., Marian G. D., (2001), Politici si instrumente de atragere a investiţiilor straine directe, Editura Albatros , Bucuresti BNR, INS 2011, FDI in Romania in 2010, Bucharest.

Borenztein, E., De Gregorio, J., Lee, J.-W. (1998), How does foreign direct investment affect economic growth, Journal of International Economics, 45, pp.115-135.

Carp, L., Popa, D. (2013), The relationship between foreign direct investment, trade and economic growth in Bulgaria and Romania under the impact of the globalization, The 2nd International Conference ICTIC 2013, Conference of Informatics and Management Sciences.

Choe, J.I. (2003), Do foreign direct investment and gross domestic investment promote economic growth?, Review of Development Economics, 7(1), pp. 44-57.

Daianu D., (2001), Winners and losers in the process of European integration.A look at Romania, Bucharest: Romanian Center for Economic Policies.

Dang, V., (2009), Institutional Determinants of Investment in Transition Economies, Economics and Finance Working Paper Series, Working Paper No. 09-33, http://www.ehow.com/list_6817141_costs-benefits-fdi-low_income-countries.html

Duhnea, C., Moraru, A. D. (2013), Investiţiile străine directe şi creşterea economică în România. European perspectives of the labour market, 99.

Georgescu, G. (2013), România în perioada post-criză: investiţiile străine directe şi efecte asupra echilibrului financiar extern [Romania in post-crisis period: foreign direct investments and effects on external financial balance] (No. 46531), University Library of Munich, Germany.

Huang, Y. (2001, November), New horizons and policy challenges for foreign direct investment in the 21st century, OECD global forum on international investment.

Iloiu, M; Csiminga, D, Mangu, S., FDI in Romania between EU and the Global Economic Crisis, Procedia Economics and Finance, 2015, 23: pp.644-651.

Johnson, A. (2006), FDI inflows to the Transition Economies in Eastern Europe: Magnitude and Determinants, Paper provided by Royal Institute of Technology, CESIS - Centre of Excellence for Science and Innovation Studies in its series Working Paper Series in Economics and Institutions of Innovation with number 59.

Jun, K.W., Singh, H. (1996), The determinants of foreign direct investment: new empirical evidence, Transatlantic Corporations, 5, pp. 67-106.

Kinoshita, Y., Campos, N. F. (2003), Why does FDI go where it goes? New evidence from the transition economies, William Davidson Institute Working Paper Number 573.

Kinoshita, Y., Campos, N. F. (2006), A Re-examination of Determinants of Foreign Direct Investment in Transition Economies, Mimeo, IMF, Washington, DC.

Kozenkow J. (2004) - The Pros & Cons of Foreign Direct Investment International Businesses, Small Business, by Demand Media, Houston Chronicle, disponibil la: http://smallbusiness.chron.com/pros-cons-foreign-direct-investment-internationalbusinesses-56164.html

Lankes, H.-PP., Venables, A.J. (1996), Foreign direct investment in economic transition: the changing pattern of investments, Economics of Transition, Vol. 4 No. 2, pp. 331-347.

Lim, E.-G. (2001), Determinants of, and the relation between, foreign direct investment and growth: a summary of the recent literature, IMF Working papers, WP/01/175.

Ludoşean (Stoiciu), B.M., (2012), A VAR analysis of the connection between FDI and economic growth in Romania, Theoretical and Applied Economics, Volume XIX, No. 10(575), pp. 115-130.

Mateev, M. I., Tsekov, I. (2012), Do Central and Eastern European Countries Posses FDI Advantages to More Developed Western Countries?, http://ssrn.com/abstract=2139361 or http://dx.doi.org/10.2139/ssrn.2139361

Mazilu, A. (2004), Investiţiile străine directe şi schimbările de structură şi performanţă în economiile central şi est-europene, Seria Probleme Economice, Editura Centrului deInformare şi Documentare Economică.

Meyer, K. (1996), The Role of Foreign Direct Investment in the Early Years of Economic transition: A Survey, Economics of Transition, vol. 3.

Milea, C. (2015), Investiţiile Străine Directe – Factor Promotor Sau Inhibitor Al Dezvoltării Durabile? (Foreign Direct Investment - Driver or Inhibitor of Sustainable Development?), http://ssrn.com/abstract=2671288

Misztal, P. (2010), Foreign direct investments as a factor for economic growth in Romania, Review of Economic and Business Studies, Issue 1, June.

Moraru, Camelia, 2013, Investiţiile străine directe şi creşterea economică în România, Economie teoretică şi aplicată, Vol. XX (2013), No. 5(582), pp. 123-133

Munteanu, C., Vâlsan, C. (1996), Investiţii internaţionale, Editura Oscar Print, Bucureşti.

Negritoiu, Misu, (1996), Salt inainte. Dezvoltarea si investitiile straine directe, Editura Pro şi Editura Expert, Bucuresti.

Nistor, P. (2012) FDI and regional disparities growth in Romania, Procedia Economics and Finance, No. 3, pp. 740-745.

Novinson E. (?), Costs & Benefits of FDI in Low-Income Countries, http://www.ehow.com/list_6817141_costs-benefits-fdi-low_income-countries.html

OECD (1999). “Foreign Direct Investment and the Environment: An Overview of the Literature”, http://www1.oecd.org/daf/mai/pdf/ng/ng9733r1e.pdf

Pelinescu, E., Radulescu, M. (2009), The impact of foreign direct investment on the economic growth and countries export potential, Romanian Journal of Economic Forecasting, No. 4, pp. 153-169.

Popovici, O.; Calin, A.; Simionescu, M.,(2014), Investigating FDI inflows in Romania through an arma model, Internal Auditing & Risk Management, p. 50.

Radulescu, M., Pelinescu, E. (2010), Impactul investiţiilor străine directe asupra potenţialului de export al României Review of Management & Economic Engineering, 9(1).

Roman, M.D., Padureanu, A. (2011), Foreign Direct Investments Influence on Romanian Economy, 2011 International Conference on E-business, Management and Economics, IPEDR, Vol. 25.

Stamp M., 1974. Has Foreign Capital Still a Role to Play in Development?, World Development, Vol.2., no.2, February, pp.123-129.

Stancu, S. (2011). Econometrie. Teorie si aplicaţii utilizând EViews, Editura ASE, Bucureşti.

Teodorescu (Ion), A.M. (2013), Impactul investiţiilor străine directe asupra dezvoltării durabile, http://conferinta2013.academiacomerciala.ro/_VOLCONF2013PDF/volumconferinta/Impactul%20Investitiilor%20Straine%20Directe%20asupra%20dezvoltarii%20durabile_TEODORESCU.pdf

Tondel, L. (2001), Foreign direct investment during transition. Determinants and patterns in Central and Eastern Europe and the former Soviet Union, Chr. Michelsen Institute, CMI Working Paper WP 2001, p.9.

Ulian, G., Turliuc, D.G., Popovici, A.N. (2014), Foreign direct investment - a key driver for growth and prosperity in Romania and the Republic of Moldova, International Conference “Monetary, Banking and Financial Issues in Central and Eastern EU Member Countries: How Can Central and Eastern EU Members Overcome the Current Economic Crisis?” http://www.mbf-eu.info/Files/53ca7065-635b-4870-9d4d-d5254f3c72b0/paper_ULIAN.pdf

Zaharia, R., Vintilă, D. (2012), Foreign direct investements and economic growth in Romania, 7th International Scientific Conference, “Business and Management 2012” May 10-11, 2012, Vilnius, LITHUANIA,http://leidykla.vgtu.lt/conferences/BM_2012/finance_engineering/248_254_Vintila.pdf

Zaman Gh., (2006), Some Macroaspects of FDI In Romania, Romanian Journal of Economics, vol. 22 (1(31)), pp. 9-27.

Zaman, G. (2012), Ways of improving foreign direct investment (FDI) contribution to Romania’s sustainable development, Annales Universitatis Apulensis Series Oeconomica, 14(2), pp.644-651.

Zaman, G., Goschin, Z. (2010), Multidisciplinarity, Interdisciplinarity and Transdisciplinarity: Theoretical Approaches and Implications for the Strategy of Post-Crisis Sustainable Development, Theoretical and Applied Economics, Asociatia Generală a Economistilor din Romania - AGER, vol. XVII (2010), No.12(553), pp.5-20.

Zaman, G., Goschin, Z., Vasile, V. (2013), Evoluţia dezechilibrelor teritoriale din România în contextul crizei economice, Revista Română de Economie, 2(46), pp.20-39.

Zaman, G., Vasile, V., Matei, M., Croitoru, C., Enescu, G. (2010). Aspecte ale impactului ISD din România asupra exporturilor şi dezvoltării durabile, Romanian Journal of Economics, pp.1-60.

World Bank Doing Business Report (2016), Measuring Regulatory Quality and Efficiency, 13th edition, Washington, US.

FOREIGN BANKS` ACTIVITY IN ROMANIA – UNDER THE SIGN OF ETHICS AND CSR OR UNDER THE PROFIT`S SIGN?

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Abstract

*T*he foreign capital appeared in the Romanian banking system immediately after the fall of communism, the modalities of implantation being the greenfield investments and the international takeovers. Most of the foreign direct investment (FDI) in the banking sector was made through the privatization process, the foreign capital being the only solution for the sale of large state-owned banks. Gradually, the foreign capital came to dominate the Romanian banking system, fact that had beneficial but also negative effects on the Romanian economy. The authors have structured their analysis on two levels: on the one hand, the positive effects of the foreign banks' activities such as the promotion of new financial products, financial inclusion, financial education and capital infusion, on the other hand, the negative aspects such as involvement in the Swiss franc crisis, the transfer of profits abroad and the evasion of corporate income tax are also highlighted.

Keywords: foreign capital, CSR, financial inclusion, financial education,

JEL classification: G21, H26

Introduction

The fall of communism and globalization of world economy generated a strong presence of foreign investors in Central and Eastern Europe, but major differences were observed among the host countries regarding the inflows of foreign direct investment (FDI) according to certain determinant factors such as the development`s level of host countries; the size of the domestic market, the pace of economic reforms, the determination of the political class in implementing reforms in the process of transition to the market economy, the signing of association agreements with the EU and the accession of some countries from the region to the EU (Podasca, 2017, p. 268; Panait&Voica, 2017, p. 268; Raluca, 2010, p. 768, Matei, 2004, p. 24-28; Subic et al, 2010, p. 780; Zaman et al, 2011, p. 22).

Initially, the preferred sector of foreign investors was industry, but the service sector is currently concentrating most of the FDI received by the countries in the region, thus falling into the global trend of tertialisation of national economies and FDI inflows (Iacovoiu et al., 2009, p. 61; Panait & Dusmanescu, 2017, p. 378, Ungureanu & Andrei, 2017, p. 518).

From the beginning, the banking sector has been among the investment preferences of foreign companies. Foreign capital was, in this economic field, the only solution for the restructuring and development of the domestic banking system in view of the low saving process registered at national level. Some specialists (Bonin et al. 2014, p. 5) even speak of the birth of the banking system in Central and Eastern Europe countries after the fall of communism, considering that before 1989 the banks in these countries did not have an economic role in the planned economy. Modern banking systems in these countries were gradually created by the privatization of state-owned banks, most of the acquisitions being made by foreign banks, the only ones with the financial strength and expertise needed to buy stock packages and further manage these financial institutions. In addition, the prospect of European Union(EU) integration has prompted the public authorities in the former communist countries to adopt a set of modern laws that regulate banking activity to keep the corruption phenomenon specific to the financial sector under control (Goldberg, 2004, p. 17). Subsequently, EU membership has forced the new member states to proceed with the harmonization of national and European legislation (Bonin et al., 2014, p. 14).

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The decision of banks to invest abroad is based on the determinants of eclectic theory developed by John Dunning. Thus, the increase of the local market, the purchasing power of the population, the legal regulations (Matei, 2004, p. 25; p. 152; Iacovoiu, 2009, p. 35 Haralambie, 2015, p. 32; Buch, 2000, p. 8) are elements analyzed by any company, for investment made abroad. In addition to these general determinants, other specific factors (with positive or negative impact) of this domain are also considered (Buch 2000, p. 11; Matei & Done, 2009, p.3, Lane, 2011, p.4):

- FDI received by the host country in non-financial sectors, which suggests that foreign banks tend to invest in those countries where their "follow the customers" are present;
- the importance of traditional financial centers in Europe;
- EU` membership of host countries;
- the adoption of the European single currency that has eliminated exchange rate volatility
- the foreign trade activity carried out in the host countries

Most FDI made by foreign banks in former communist countries was made by participating in the privatization process of state-owned banks, this being the fastest way of implantation that allows quick access to the local market (Matei & Done, 2009, p. 4). The main asset of the state-owned banks offered for sale was the large number of branches and work points in most cities. So, the extended territorial network of these banks was a strategic asset for which foreign banks were involved in the economies of Central and Eastern Europe. There have also been greenfield investments made by some foreign and subsequent, mergers and acquisitions of private banks with domestic or foreign private capital have been set up. Finally, there is a strong concentration of the banking system in the hands of foreign capital.

Description of the Problem

The activity of foreign-owned banks in Romania is subject to the action of two contradictory forces. On the one hand, shareholders want the bank's actions to be guided by economic principles, maximizing profit being the main objective for the parent company. In many cases, foreign investors are accused of non-payment of taxes and duties related to the work done in the host country, and the transfer of profits to the parent company or subsidiaries where the tax system is friendlier (through huge interests for the loans received by the subsidiaries from the parent bank). Currently, in Romania, the activity of banks with foreign capital is in the attention of the press and the public authorities after it was found that over the last five years, about 70% of the banks in Romania did not pay the profit tax. In addition, after the outbreak of the international financial crisis, the rise in financial instability has generated a series of difficulties in reimbursing consumer and real estate loans by individuals. The result was the increase in the number of complaints made by the consumers in the banking sector, which, following the inspections carried out by the public authorities, revealed abusive behavior by the banks in relation to individuals.

On the other hand, the pressures exerted by public authorities, competition and consumers determine banks to have or mimic ethical behavior, and, moreover, run different CSR (corporate social responsibility) programs. In this way, as economic agents, banks contribute to the sustainable development of the national economy and the communities in which they operate (Matei, 2009, p. 152; Matei & Voica, 2013; p. 121). From the analysis of CSR programs conducted by foreign-owned banks in Romania and presented on the websites of these financial institutions, the most important aspects of CSR policy are financial education, financial inclusion, involvement in local communities and environmental protection.

Therefore, foreign banks have a duplicative behavior in the sense that they want to demonstrate their involvement in the Romanian economy, but in reality, by failing to pay the profit tax, they negatively influence the revenues to the state budget. Under these circumstances, CSR programs are just simple marketing tools that they want to increase their market share.

Methodology and Data Sources

The analysis is structured on two levels. In the first phase, based on the public data (on the financial situation) available on the website of the Ministry of Public Finance, the top 10 banks from the Romanian banking system are selected according to total assets criterion and an analysis on

their results is conducted. Another source of information is the public statements of the representatives of the Romanian public authorities - the prime minister, the minister of finance and the governor of the National Bank of Romania, but also the officials of the banks concerned. In the second phase, the CSR policies initiated by these banks are analyzed. The main source of data is, in this case, the banks' websites, most of them having a sustainability section or CSR, and where the CSR programs are run, the CSR policy and eventually CSR reports.

Results Obtained

In the first part of our analysis we researched the banking system of Romania and observed that In December 2016, the system was composed of 37 credit institutions of which 8 foreign banks branches with a net total asset of 393.647.91 million RON.

The first 10 banks in the system accounts for more than 80% of the total assets for the year 2016. Also, the top 3 banks accounts for more than 40% of total assets for the same year.

In table 1 we present the first 10 banks of the Romanian banking system according to their total assets for the year 2016. We also specify the unique code of registration and the majority shareholder.

Table1

Top 10 Banks according to the share of total assets 2016

Bank	CUI	Majority shareholder	Market share (2016) (%)
BANCA COMERCIALA ROMANA SA	361757	Erste Bank (Austria)	16.28
BANCA TRANSILVANIA SA	5022670	EBRD	13.15
BRD GROUPE SOCIETE GENERALE SA	361579	Societe Generale (France)	12.87
RAIFFEISEN BANK SA	361820	Raiffeisen International (Austria)	8.49
UNICREDIT BANK SA	361536	UniCredit SpA (Italy)	8.30
CEC BANK SA	361897	Romanian State	7.16
ING BANK N.V.	6151100	ING Groep (Holland)	7.08
ALPHA BANK ROMANIA SA	5062063	Alpha Bank (Greece)	3.74
BANCPOST SA	404416	Eurobank (Greece)	2.96
GARANTI BANK SA	25394008	Garanti Bank (Turkey)	2.28
Share of total assets in Romanian banking system			82.31

Source: authors based on annual reports

The Romanian banking system is controlled by the foreign banks, as we can see only CEC Bank in the first 10 with only 7.16% of total assets that is controlled by the Romanian state. Banca Comerciala Romana SA, Banca Transilvania SA and BRD Groupe Societe Generale SA are the leaders of the system with assets of more than 165 billion RON. The home countries of the first 10 banks are based in European Union (EU) in member states like Austria, France, Italy Holland and Greece. The only bank coming from outside the EU is Garanti Bank SA from Turkey. The Romanian banking system is highly concentrated as the top three banks control 40% of total assets.

Next, we conduct an analysis of the results of these banks. The indicator used for this analysis is the Profit/Loss account available on the website of the Ministry of Public Finance. In table 2 we presented the results of the banks between 2011 and 2016.

Our analysis show that the worst results are registered by the banks from the lover part of the rankings, like Alpha Bank Romania SA, Bancpost SA and Garanti Bank SA and the number one of the ranking Banca Comerciala Romana. The results show us that the years 2011, 2012 and 2014 were the hardest for the banking system. The 2011 and 2012 were affected by the international financial crisis of 2008 that had a big influence on the Romanian banking system. The best performing bank according to its profits is Banca Transilvania SA which registered an increase of its profit in 2015 of twenty times over the level of 2011 with a decrease in 2016. This increase can be explained by the acquisition of Volksbank in 2015. Most of the other banks registered an ascending trend regarding the level of profits except for CEC Bank SA which registered a decrease of the level of profits in the analyzed period.

Table 2

Profit/Loss of top 10 banks (lei)

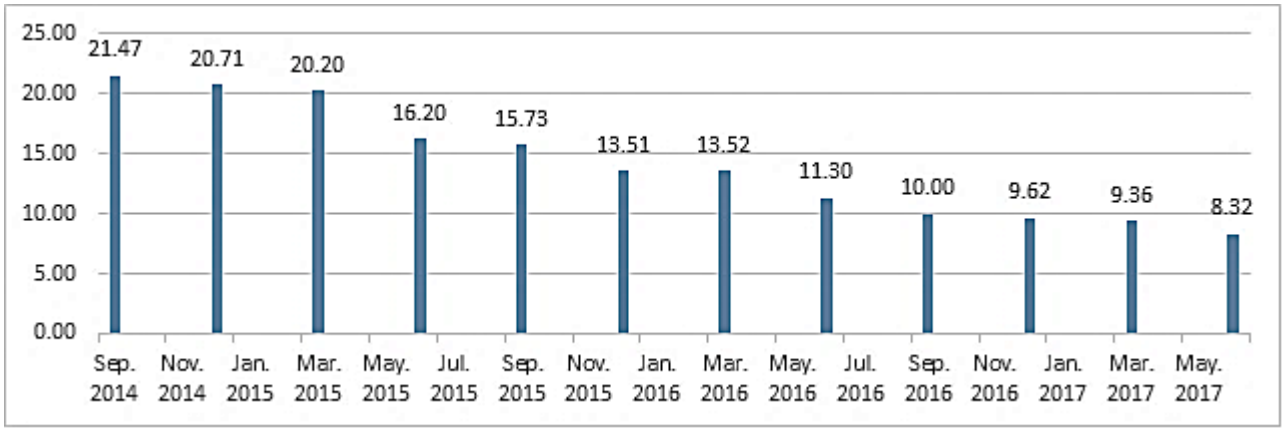
AN	BANCA COMERCIALA ROMANA SA	BANCA TRANSILVANIA	BRD GROUPE SOCIETE GENERALE	RAIFFEISEN BANK SA	UNICREDIT BANK SA
2011	-510,818,823	131,870,976	465,265,368	320,068,972	103,062,227
2012	-1,214,832,834	320,431,880	-331,929,991	378,065,252	173,128,861
2013	335,526,508	374,898,104	385,775,981	458,404,596	75,086,568
2014	-2,629,568,499	434,329,895	43,239,842	501,366,835	80,293,321
2015	963,426,958	2,417,668,444	445,422,092	437,564,405	222,054,978
2016	886,085,830	1,228,440,318	728,280,960	451,628,260	266,554,448
AN	CEC BANK SA	ING BANK N.V.	ALPHA BANK ROMANIA SA	BANCPOST SA	GARANTI BANK SA
2011	67,445,929	129,611,734	-117,707,116	-11,016,904	-79,438,040
2012	36,962,870	172,863,424	-5,106,760	-49,910,268	-106,759,657
2013	43,627,532	184,669,356	35,106,175	134,673,507	87,780,028
2014	7,726,560	280,009,185	-139,657,933	-268,970,203	1,222,412
2015	10,993,682	269,714,810	-26,749,963	35,247,311	57,070,785
2016	9,600,825	438,362,823	114,558,952	26,060,403	-38,504,116

Source: authors based on m-finante.ro

Regarding the profit tax payed by each of these banks we must acknowledge that Romanian accounting law regarding banks allow them to deduct the losses registered in the past years and according to the Prime Minister and other source from the Romanian government only half of the banks payed profit tax in the last five years.

Another aspect that contributed to bank loses was the increase level of non-performing loans generated by the international financial crisis. The level of non-performing loans (NPL) in Romania increased from 1.8% in 2006 to peak at 21.87% in 2013.

Figure 1 - Non-performing loans ratio (EBA definition)



Source: NBR

As we can see from Fig.1 the level of NPL in the last years registered a constant decrease, in May 2017 the level of NPL represents only 38% of the level registered in September 2014, as the banks started to clean their balance sheets by selling packs of NPLs at high discounted prices as low as 5% of the value.

The banks sold these packages at these discounts because they can deduct the rest of 95% and pass it on loses which they can deduct on the next year's profit tax in the case the value is higher than the current year profit. A decrease in profitability indicators for one or several years may be considered an acceptable sacrifice if this decrease is offset by strengthening the financial stability and the security of the credit institution (Iov, 2014, p.357)

The second stage of the study consists in the analysis of the banks web sites to identify the corporate social responsibility (CSR) actions. Excepting CEC Bank SA, all the other banks conduct CSR activities and advertise those activities in a special section of their website.

In our analysis of the web sites and reports regarding the CSR activity we observed that, in the case of many banks these sections contained old information regarding activities that took place some years ago. Even some reports from the banks are from as far as 2010.

This aspect may induce the idea that at a moment in the past the banks started to get involved in CSR activities, but the expected results didn't come and they abandoned these activities or didn't put so much effort into their development. On the other hand, some banks have an intense activity in the CSR field and they present each activity on their web site. In table 3 we present the domains in which each bank conducts CSR activities

Table 3

CSR activities of banks from top 10, by domain

Bank	Culture	Sport	Education	Community	Health	Environment
BANCA COMERCIALA ROMANA SA	-	-	x	x	-	-
BANCA TRANSILVANIA SA	x	x	x	x	x	x
BRD GROUPE SOCIETE GENERALE SA	x	x	x	x	x	-
RAIFFEISEN BANK SA	-	-	-	x	-	x
UNICREDIT BANK SA	x	x	x	x	-	x
CEC BANK SA	-	-	-	-	-	-
ING BANK N.V.	x	-	x	x	-	x
ALPHA BANK ROMANIA SA	x	x	x	x	-	x
BANCPOST SA	x	-	x	x	-	-
GARANTI BANK SA	-	-	x	x	-	x
Total	**6**	**4**	**8**	**9**	**2**	**6**

Source: authors based on banks web sites

The analysis of the banks CSR activities reveals that the main fields they direct their actions are mainly the Community and Education. In the case of Community actions 9 out of 10 banks conducts CSR actions like volunteering, supporting NGOs, promoting good civic practices amongst its employees, road safety and defensive driving lessons and many other forms. The second field as importance where 8 out of 10 banks conducts CSR actions is Education with many actions like promoting financial education (which has effects in the field of financial inclusion by opening the door for new and more conscious customers as they better understand how the banking system works), supporting children with a low level of living standard, according scholarships for talented young people and more. Considering the fields of Culture and Environment we observed that 6 out of 10 banks conducts CSR activities like supporting and funding cultural events and participating, or organizing actions like, planting trees, cleaning areas full of garbage promoting reduction of garbage and CO2 emissions and more. In Sport, we observed the involvement of 4 out of 10 banks in activities like organizing sports events, supporting sports teams and so on. The least interesting field of CSR for banks is Health where only 2 out of 10 banks conducted activities like supporting blood donation campaigns and supporting medical activities development.

Discussions

The presence of foreign capital in the Romanian banking system implies certain benefits, but also negative effects on the national economy. First, foreign banks bring not only know how and expertise, risk management practices, but also financial funds for financing the local companies, including those with domestic capital. Given the financial strength of the groups they come from, foreign-owned banks provide greater stability to the economy of the host country. Access to finance ensures the performance of companies and implicitly the development of the financial market (Poelhekke, 2014, p. 2) and the economic growth of the host country (Bruno & Hauswald,

2014, p.3). In addition, the presence of foreign-owned banks in national economies is a factor favoring the attraction of new FDI in the non-financial sectors (Poelhekke, 2014, p. 28).

Considering the specific situation of the banking systems in former communist countries, the market entry of capital banks also determines the promotion of new products and services (Dracea & Cristea, 2008, p. 37; Cárdenas et al. 2003, p.3) such as internet & mobile banking, which contributes to development of financial market, and to increase the degree of financial inclusion especially for the population in areas where there are no agencies of these banking institutions.

Financial education is a component of CSR programs run mainly by banks, but also by private companies that will thus provide access to information for their employees for specific topics such as saving and investing savings. Another provider of financial education programs is also the public authorities; at the level of EU countries, there are national financial education strategies (Ene & Panait, 2017, p. 147).

In Romania, financial education programs are carried out by commercial banks and the National Bank of Romania, by the Romanian Banking Association and by capital market institutions such as Bucharest Stock Exchange or the Financial Supervisory Authority (Ene, 2017, p.). In former communist countries, financial education programs are particularly important given that the market-specific financial phenomena were unknown to the population 30 years ago. Unfortunately, the involvement of public authorities in Romania in the field of financial education and consumer protection was quite late. Starting with 2008, the National Bank of Romania has been involved in various projects to support economic and financial education, the main target segment being young people. The National Authority for Consumer Protection (NACP) has assumed the supervision of the financial market only starting with 2008, a year from which it had various legislative initiatives for the observance of the rights of the individuals in relation with the banks. NACP's controls at various banking institutions have revealed numerous irregularities such as the omission of disclosing information, misleading false information, raising interest rates without concluding additional acts (NACP, 2017, p 1-37). Romania is characterized by a low degree of financial education, being the last place in the European Union according to the share of the population that holds financial knowledge: 22%, compared to the European average is 52% (NBR, 2017, p.134).

The report of disproportionate forces between banks and consumers is demonstrated not only by the many consumer complaints made to public institutions but also by the EU's concerns such as the adoption of Directive 17/2014 on consumer credit agreements for residential immovable property and amending of Directives 2008/48 / EC and 2013/36 / EU and of Regulation (EU) No. 1093/2010, whose provisions had to be transposed into Romanian legislation until 21 March 2016. In the case of Romania, this deadline was exceeded because of disputes on the text of the normative act between the National Bank of Romania and NACP.

The effectiveness of financial education programs is difficult to determine, proven fact by the Swiss franc crisis that affected most Central and Eastern European countries, but also the explosion of consumer credit in the run-up to the crisis period (loans only with the bulletin). The stability of the Swiss franc compared to other currencies has prompted an explosion of bank offers on loans in this currency. The Swiss franc was presented as a very stable currency, and the lack of financial education, determined an expansion of credits

The introduction of new financial products is closely related to the digitization of financial services, a trend that has consequences on the density of banking agencies. Romania is experiencing a consistent evolution of the number of Internet users (32 Internet users per 100 inhabitants in 2008 to 56 in 2015), below the European average and well behind the Nordic and Baltic countries have the supremacy in the field, because in these countries over 90% of the inhabitants have access to the Internet (NBR, 2017, p.82). The introduction of new financial products, but especially the digitization of financial services, have positive effects on the development of an inclusive financial system, with positive consequences for the sustainable development of the host country (Voica, 2017, p. 122). In Romania, the degree of financial inclusion is low. In 2014, the rate of holding a bank account among the adult population was 61 % in 2014, compared with the European average of 95 % (NBR, 2017, p. 134). Also, for other indicators such as card usage rate or ATM terminal number of 100,000 adults, Romania is in the last places in the EU.

In the case of Romania, there is also a significant exposure of the banks towards the public sector. Banks' receivables from public authorities (holdings of government securities and direct loans) reported on total assets place Romania on the second place in the EU, 22.6% in December 2016 compared to the average of 9.2%. (NBR, 2017, p. 72). Exposure to local public authorities is on the rise, the main instrument used to be bank credit (93 %, while for the government sector, the main unit is government securities, with a 99 % share). The intensification of the link between the two sectors can generate significant bank risks, especially with the excessive concentration of government debt instruments (about 70%) by only five banks.

Therefore, the effects of the presence of foreign-owned banks on the stability of the local banking system may be divergent. On the one hand, foreign-owned banks may be an element of stability in times of local stress because they are part of financial groups that have international exposure but on the other hand they may manifest themselves as a source of contagion negative events taking place in the world economy (Cárdenas et al, 2003, p. 3). Given the international exposure of foreign-owned banks, in times of crisis, they can adopt "cut and run" behavior, as they have a much greater capacity to relocate than domestic banks.

The international financial crisis has demonstrated the fragility of large banks with international exposure (Cristea et al. 2010, p 37; Ivan & Muresan, 2010, p. 2261), but also the importance of the financial education process that must strengthen the financial experience of consumers who should be more cautious in the process of evaluating and acquiring the products offered by banks. The extent of the financial crisis has been fueled by the intensive process of integration that characterizes the international financial sector (Matei, 2007; p 438; Niepmann, 2015, p. 246; Bruno & Shin, 2014, p 536, Lane, 2011, p. 18). In Romania, the situation of the banks during the crisis was quite stable. Moreover, Romania is one of the few countries in the EU where the government did not provide any kind of financial support to the banking system.

Conclusions

Foreign banks had an important influence on the development of the Romanian banking system as it is now and its resilience in the hard moments of the international financial crisis. However, we should acknowledge that all these banks have the role to create profits for their foreign owners. As a result, they will use any legal tool to increase their profits.

Foreign banks translate the influence and decisions of their shareholders on the market. NBR, as the supervisory body of the market, must ensure the use of good practices on the market. Sometimes these interests are the same and sometimes they collide giving birth to conflicts.

Because of the high concentration of the banking system in the hands of a few banks their power of negotiation is high and can influence the decisions of NBR. Also, many of the banks use “fiscal optimization” tools, some of which are at the edge of the law.

Because of their high financial power, many times, the banks use illegal clauses in their relationship with customers. This can be acknowledged by the many legal trials that the banks lost in the last years. The cases of swiss francs loans are well known and generated street movements to put pressure on government to find a way to reconcile the two parties.

The NPL evolution after financial crisis generated a lot of concern in the banking system. This has passed as the banks cleaned their balance sheets by selling NPL packages at high discounts. The target for 2017 is to get the level of the NPL to 5% which means the selling of NPL packages will continue.

The use of CSR by the banks in Romania has purely an advertising role, many of the banks have a CSR section on their websites, but this section sometimes is old and presents actions that took place some years back. This is not the case for every bank, as some of them have an intense activity in the field of CSR. Also, the CSR activities are targeted in the field with the higher impact for the banks like community and education. The communities’ actions provide higher visibility while the educational ones provide the expanding of the future customer pool as they are informed of banking system products.

Future Directions to Be Approached

Further we intend to extend the research to all the banks of the Romanian banking system to have a complete picture. Even though the analyzed banks represent more than 80% of the banking system assets we want to see how the little players act on the market.

We will further try to find a source for the profit tax paid by every bank, as we could not find reliable information, only data that could not be verified through proper channels.
Another research direction will be to try to find a link between the CSR activities of banks and their results.

Bibliography

Bonin, J., Hasan, I., & Wachtel, P. (2014). Banking in transition countries., https://helda.helsinki.fi/bof/bitstream/handle/123456789/8115/173167.pdf?sequence=1&isAllowed=y

Bruno, V., & Shin, H. S. (2014). Cross-border banking and global liquidity. The Review of Economic Studies, 82(2), 535-564.

Bruno, V., Hauswald, R. (2012). The Real Effect of Foreign Banks, 1-43, http://www.ebrd.com/downloads/news/hauswald.pdf

Buch, C. M. (2000). Why do banks go abroad? - Evidence from German data. Financial Markets, Institutions & Instruments, 9(1), 33-67., https://www.econstor.eu/bitstream/10419/17810/1/303447842.pdf

Cárdenas, J., Graf, J.P., O'Dogherty, P. (2003), Foreign banks entry in emerging market economies: a host country perspective, 1-29, https://www.bis.org/publ/cgfs22mexico.pdf

Cristea, M., Dracea, R., & Marcu, N. (2010). The direction of the financial sector's involvement in overcoming crisis: A case study of Romania. African Journal of Business Management, 4(15), 3356.

Dracea, R., & Cristea, M. (2008). Banc assurance-banking and insurance complement. Romanian results on the international background. Revista tinerilor economişti, (10), 36-44.

Ene, C. (2017). Current issues regarding the protection of retail investors on the capital market within the European Union, The USV Annals of Economics and Public Administration, Vol 17, No 1(25), pp. 35-44

Ene, C., & Panait, M. (2017). The financial education-part of corporate social responsibility for employees and customers. Romanian Journal of Economics, 44(1 (53)), 145-154.

Goldberg, L. (2004). Financial-sector FDI and host countries: New and old lessons (No. w10441). National Bureau of Economic Research., https://core.ac.uk/download/pdf/6743684.pdf

Haralambie, G.A. (2015), Globalizarea si sursele de finantare ale firmei, Pro Universitaria Publishing House, Bucharest

Iacovoiu, V. B., Bucur, C. R., & Trif, D. (2009). Development of Services in Romania under the Influence of Transnational Corporations. Petroleum-Gas University of Ploiesti Bulletin, Economic Sciences Series, 61(4).

Iacovoiu, V. B. (2009). Investiţiile străine directe între teorie şi practică economică: analize comparative. ASE Expert Publishing House, Bucharest.

Rodica, I. D. (2014). Financial Performance In Credit Institution Management. Annals-Economy Series, 354-357.

Ivan, M., & Muresan, J. D. (2010). The Implications of Globalization upon the International Banking Activities. In The 14th International Business Information Management Association Conference-Business Transformation through Innovation and Knowledge Management An Academic Perspective IBIMA Proceedings. p. 2261-2267.

Lane, P. R. (2013). Financial globalisation and the crisis. Open Economies Review, 24(3), 555-580., http://www.ivr.uzh.ch/dam/jcr:ffffffff-bd6d-22cc-ffff-ffffcdb836ef/Text_13_Philip_R_Lane.pdf

Matei, M., & Voica, M. C. (2013). Social Responsibility in the Financial and Banking Sector. Economic Insights-Trends & Challenges, 65(1).

Matei, M. (2004). Foreign direct investments. Functions and evolutions 1990-2000. Bucharest: Expert Publishing House.

Matei, M. (2013). Responsabilitatea socială a corporaţiilor şi instituţiilor şi dezvoltarea durabilă a României. Bucharest: Expert Publishing House.

Matei, M., & Done, I. (2009). Considerations regarding the role of foreign direct investment in Romanian banking system. Revista Romana de Economie, 28(1).

Matei, M. (2007), Cross-border mergers and aquisitions in European Union banking system, Analele Universităţii din Oradea, Seria Stiinţe Economice, tom XVI 2007, ISSN-1582-5450, pp. 437-441, http://anale.steconomice.evonet.ro/arhiva/2007/finance-accounting-and-banks/97.pdf

Niepmann, F. (2015). Banking across borders. Journal of International Economics, 96(2), 244-265., https://www.econstor.eu/bitstream/10419/93603/1/740907840.pdf

Panait, M., & Voica, C. (2017). The relation between foreign direct investments and some economic indicators. The case of Romanian economy. Theoretical and Applied Economics, 24(2 (611), Summer), 263-276.

Podasca, R. (2017), Econometric study of the correlation between Foreign Direct Investments and Gross Domestic Product in Romania, Management Strategies, vol. 35, issue 1, p 261-268

Poelhekke, S. (2015). Do global banks facilitate foreign direct investment? European Economic Review, 76, 25-46., http://www.bde.es/f/webbde/INF/MenuHorizontal/SobreElBanco/Conferencias/2014/Archivos/Ficheros/DoGlobalBanks.pdf

Raluca, P. (2010). Advantages and Disadvantages of Globalization. Ovidius University Annals, Economic Sciences Series, 10(1), 768-771.

Subic, J; Vasiljevic, Z.; Andrei, J. (2010) The impact of FDI on the European economic development in the context of diversification of capital flows. In Proceedings of the 14th International Business Information Management Association, Business Transformation through Innovation and Knowledge Management: An Academic Perspective, Istanbul, Turkey, 23–24 January 2010; Volumes 1–4, pp. 779–787.

Voica, M. C. (2017). Financial inclusion as a tool for sustainable development. Romanian Journal of Economics, 44(1 (53)), pp. 121-129.

Zaman, G., Vasile, V., Matei, M., Croitoru, C., & Enescu, G. (2011). Some challenging (macro) economic aspects of FDI in Romania. Romanian Journal of Economics, 2(42), pp. 21-58

* * *, http://www.bursa.ro/exclusivitate-27-de-banci-nu-profit-nu-impozit-328647&s=banci_asigurari&articol=328647.html

* * *, National bank of Romania, (2017), Raport asupra stabilitatii financiare,

* * *, National Authority for Consumer Protection Raport , https://docs.google.com/viewerng/viewer? url=http://economie.gov.ro/images/communicate/august/raport+ANPC.pdf&hl=ro_RO

SOME OBSERVATIONS ON INCOMMENSURABILITY, ŚŪNYATĀ AND «HIGH STRANGENESS».

Narcis ZĂRNESCU,[190]

Abstract

The study brings together three concepts that define three different areas of the mind: the socio-philosophy of science, the Mahayana Teaching and quantum physics. The idea of incommensurability, central to both Kuhn's philosophy and Feyerabend's pluralism, is one of the starting points of our study. The incommensurability is a miscommunication: between pre- and postrevolutionary scientific traditions, between the Newtonian and Aristotelian or Cartesian paradigm, between the socio-economic and political realities, on the one hand, and the economic theories and economic doctrines, on the other hand. *Śūnyatā* translated into English as emptiness and voidness, is a Buddhist concept which has multiple meanings depending on its doctrinal context. It is either an ontological feature of reality, a meditation state, or a phenomenological analysis of experience. Śūnyatā, emptiness, was further developed by the Abhidharma schools, Nāgārjuna and the Mādhyamaka school, an early Mahāyāna school. From this perspective, the numerous «illusionary existences may well be diverse and confusing, arising and decaying». But when we look into their true nature, we will find them void and of nirvana-nature. Finally, in particle physics, strangeness is a property of particles, expressed as a quantum number, for describing decay of particles in strong and electromagnetic interactions which occur in a short period of time. The first question to which our study should answer is: to what extent these three concepts could support a radical critique of economic theories?

Keywords: incommensurability, Kuhn, Feyerabend *śūnyatā*, strangeness, Abhidharma, Nāgārjuna, Mādhyamaka

JEL classification: C63

Null Hypothesis

I would propose first a particular *null hypothesis*, (Fisher, 1918, 1935; Rietz, 1936; Neyman, 1937; Moore, 2003). The null hypothesis will be obviously asymmetric. Fischer (1935, 1966, and 1971, Ch. II, Ch. X) observed that « (...) the null hypothesis is never proved or established, but is possibly disproved, in the course of experimentation. Every experiment may be said to exist only in order to give the facts a chance of disproving the null hypothesis.»

0.1. My 'null hypothesis' is based on a metaphorical architecture: *Śūnyatā* translated into English as emptiness and voidness, is a Buddhist concept which has multiple meanings depending on its doctrinal context. It is either an ontological feature of reality, a meditation state, or a phenomenological analysis of experience. Śūnyatā, emptiness, was further developed by the Abhidharma schools, Nāgārjuna and the Mādhyamaka school, an early Mahāyāna school. From this perspective, the numerous «illusionary existences may well be diverse and confusing, arising and decaying». But when we look into their true nature, we will find them void and of nirvana-nature. Finally, in particle physics, strangeness is a property of particles, expressed as a quantum number, for describing decay of particles in strong and electromagnetic interactions which occur in a short period of time. The first question to which our study should answer is: to what extent these three concepts could support a radical critique of economic theories? But before making the phenomenological description of my hypothesis, I should open several historical parentheses, inaugurate several paths and bases of concepts, as generators of my arguments and supports of the utopian *null hypothesis*, alternative for other utopias put into practice and that only falsify and manipulate mentalities, decisions and history.

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From Thorstein Veblen to Richard H. Thaler

From the 1880s to the early 1900s, there was a widespread opinion that social and biological phenomena were closely related, as well as socio-economic phenomena were explicable in purely biological terms. In 1898, Torsten Bunde Veblen, a Norwegian-American economist and sociologist, a critic of capitalism, famous for the idea of «conspicuous consumption», published a study entitled «Why is Economics Not an Evolutionary Science». He highlights the mistakes and failure of «the economists of the classical trend» that «make their science a genetic account of the economic life process», and too 'the Historical School' that follows « the lines of pre Darwinian speculations on development» (Veblen, 1898, 6-7). The theory of socio-economic evolution that Veblen developed in the 1896-99 period is based on a 'post-Darwinian' evolutionary economics and a critique of mainstream economic thought. It should be noted that in 20th XX Century the economy will experience a revival of the evolutionary economics with, Richard Nelson and Sidney Winter (1982). But the Veblen hypothesis will introduce now a new element, influenced by William James and Charles Sanders Peirce: the psychology of the individual. His model is based on the discoveries of the socio-psychology of his time, which recommends him as one of the precursors of Richard H. Thaler: «The later psychology, re-enforced by modern anthropological research, gives a different conception of human nature. According to this conception, it is the characteristic of man to do something, not simply to suffer pleasures and pains through the impact of suitable forces. He is not simply a bundle of desires that are to be saturated by being placed in the path of the forces of the environment, but rather a coherent structure of propensities and habits which seeks realization and expression in an unfolding activity. According to this view, human activity, and economic activity among the rest, is not apprehended as something incidental to the process of saturating given desires. The activity is itself the substantial fact of the process, and the desires under whose guidance the action takes place are circumstances of temperament which determine the specific direction in which the activity will unfold itself in the given case. These circumstances of temperament are ultimate and definitive for the individual who acts under them, so far as regards his attitude as agent in the particular action in which he is engaged. But, in the view of the science, they are elements of the existing frame of mind of the agent, and are the outcome of his antecedents and his life up to the point at which he stands.» (1898, 12). Veblen has a very modern holistic vision of the individual as an economic agent: the individual «enters into each successive action as a whole, although the specific end sought in a given action may be sought avowedly on the basis of a particular interest; as e.g., the economic, aesthetic, sexual, humanitarian, devotional interests. Since each of these passably isolable interests is a propensity of the organic agent man, with his complex of habits of thought, the expression of each is affected by habits of life formed under the guidance of all the rest.» (1898, 14).

1.1. In 2017, Richard H. Thaler was awarded the Nobel Memorial Prize in Economic Sciences for his contributions to behavioral finance and economics. In further defining that field, he is collaborated with Daniel Kahneman and others. Thaler's vision for incorporating insights from psychology into economics was first laid out in his 1980 article «Toward a positive theory of consumer choice.» In his «Anomalies» (*Journal of Economic Perspectives*), as well as in articles, comments, and books, he continued to analyze how economic decisions are influenced by human psychology, or with his words, «the three bounds»: bounded rationality, bounded willpower, and bounded self-interest (Thaler, 2015, 258).

1.2. In 2002, psychologist Daniel Kahneman received the Economics Prize for his research on human judgement and decision-making under uncertainty. Kahneman and Tversky's (1979, 263-291) prospect theory aims to describe the actual behavior of individuals when making decisions under risk, which may not necessarily be rational or optimal. In later work, Kahneman and Tversky provided an important extension of prospect theory called «cumulative prospect theory» (Tversky & Kahneman, 1992, 297-323). Consequently, the scientific, ideological, and mental macro-context of the theses, hypotheses and models proposed by Thaler, Tversky and Kahneman is profoundly marked by a return to the psychology of the individual, to the ego and Self, to his reasonable or unreasonable decisions, which can set off Brownian social movements, economic crises, wars. But the return to the ego, in the singular, confirms the crisis of globalization, the failure of systemic economies, the defeat of the free market, and at the same time, the lack of ideas, the vacuum of theoretical and economic imagination. Thaler & comp. are trying to reload and even to plagiarize just a little David Hume (1739, Book III, Sect VII), which argued that imperfect self-control is one of

the three reasons for why people need a government, and Adam Smith (1759), which described self-control as a struggle between the passions and an impartial spectator. It must not be forgotten William James (1890), that wrote that the «effort of attention is the essential phenomenon of the will. […] What constitutes the difficulty for a man laboring under a passion of acting as if the passion was wise? Certainly there is no physical difficulty. It is as easy physically […] to pocket one's money as to squander it on one's cupidities, to walk away from as towards a coquette's door. The difficulty is mental: it is that of getting the idea of the wise action to stay before the mind at all.» (1890, Ch. XXVI). Conversely, it is also possible that the flow of crises and conflicts may succeed each other infinitely and may even correct their trajectories. Simultaneously, as history has proved time and time again, in an optimistic perspective, the tiger can live together with the antelope, the wolf with the sheep, and so on as in the Noah's Ark, a legendary sketch of the Chinese capitalism.

Incommensurability and Nano-economics. Arrow, Kuhn, Porter, Youtie, Kolbert u.s.w

The history of science reveals competing paradigms failing to make complete contact with each other's views. Kuhn (Amani, 2006, 323-345) calls the collective causes of such miscommunication the incommensurability between pre- and post-revolutionary scientific traditions (Kuhn, 1962). Porter and Youtie (2009, 1023-1041 & 2009, 534-536) studied the relationship between nanoscience and other disciplines of science. Why not, nanoeconomics, too? After the social choice theory or *social choice* (1951/1963) as a theoretical framework for analysis of combining individual opinions, preferences, interests, or welfares to reach a collective decision or social welfare, Kenneth Joseph Arrow (1987; Sen, 2008) will define the theory of economic behavior of individual economic agents in market or nonmarket conditions as nanoeconomics. In 1996, the nanoeconomics will be considered as an independent branch of the economic theory, «economy of physical persons», characteristics of the Russian economy up to this day. On the other hand, the process of globalization has integrated financial markets and cross-border capital flows. Various types of 'root causes' as leverage and liquidity, conflicts of interest, taxes and subsidies, and governance could and generate hybrid wars, asymmetric conflicts (Hoffman, 2007; Johnson, 2014, 65-76), *sixth Extinction* or more (Kolbert, 2014), asystemic threats to the stability of the global psycho-socio-economical-financial systems. Diagnosis and prognosis of William I. Robinson (2003, 2004, 2008), professor of sociology, global and international studies, and Latin American studies, at the University of California-Santa Barbara, is almost apocalyptical: «The need for dominant groups around the world to secure widespread, organized mass social control of the world's surplus population and rebellious forces from below gives a powerful impulse to projects of 21st century fascism. Simply put, the immense structural inequalities of the global political economy cannot easily be contained through consensual mechanisms of social control. We have been witnessing transitions from social welfare to social control states around the world. We have entered a period of great upheavals, momentous changes and uncertainties. The only viable solution to the crisis of global capitalism is a massive redistribution of wealth and power downward towards the poor majority of humanity along the lines of a 21st century democratic socialism, in which humanity is no longer at war with itself and with nature.»[191]

2.1. Economic history is the story of a virtual monster whose victims are hard to count. Hunger, fear, and sacrifice for irrational ideals are the products-instruments of manipulation of this monster, invented by men after the death of God. The economy gradually becomes another type of deity, crueler, more rapacious, and more cunning, with many faces and forms, metamorphosable.

Open Conclusion

It is acknowledged that causality is different in the Advaita, Samkhya, and Abhidharmic schools. It is acknowledged too that the Humian, Kantian, and Aristotelian conceptions of causality differ significantly. «Is the conception of causality determined by the ontology, or by epistemological

[191] *[https://conspiracyanalyst.org/2015/04/27/global-capitalism-and-the-global-police-state-crisis-of-humanity-and-the-specter-of-21st-century-fascism/].*

assumptions, etc.? If this is correct, then one would expect to find different conceptions of causality in different ontologies.» (Gangadean, 1975, 65-70).

There are therefore at least two types of ontology, two kinds of epistemologies and two types of causal or causative taxonomies whose logical or irrational games can give birth to new harmonies or new chaoses, two types that could determine, regulate, regenerate or transform the economic causalities, theories, doctrines and the modalities of the applied ones. Having succeeded in systematically deciphering and codifying all the possible combinations between ontology epistemology and causality, one could answer to the question-null hypothesis: 'to what extent these three concepts could support a radical critique of economic theories'?

Our *null hypothesis* has been assumed as necessary for our demonstration to be true until evidence indicates otherwise. The *null hypothesis*, being only a logical artifice, has proven its *asymmetricity*. Unlike the Fischerian meaning, and the deep statistical mechanisms defined by the British scientist, our *null hypothesis* it's not free from «vagueness and ambiguity». On the contrary, it is especially appropriate to a 'vague and ambiguous' metaphorical logic, necessary to our methodology, and hermeneutics of the Theravada, Mahayana and Vajrayana Teaching, and quantum physics.

It is obvious that my approach represents a small sequence of my systematic criticism of the Western world economic theories. At the same time, the references drawn from the Vedantine and Mahayana Teaching could to crystallize, at a particular moment, in a repertoire of ideas, concepts, and alternative economic theories, even if utopians, to the failure, the Decline and *The Downfall of the Occident* (Spengler, 1926/1991).

Once at this stage of our hermeneutic itinerary, it is time to make another detour / return to re-analyze, reevaluate the new semantic constellations, the new integrations, and subject them to diagnosis and prognosis in order to be able to map the anomalies, the gaps, and the dysfunctions. This is the ritual of understanding process. The game of logic and incongruous metaphors. The useless effort to calibrate and harmonize the dreams of the rich with the dreams of the poor. It's just the job of Shakespeare and Kafka.

Bibliography

Amani Albedah (2006) «A Gadamerian Critique of Kuhn's Linguistic Turn: Incommensurability Revisited», International Studies in the Philosophy of Science **20**:3.

Arrow, Kenneth J. (1951/1963), Social Choice and Individual Values, New York: Wiley.

Fischer, R. A. (1918), «The Correlation between Relatives on the Supposition of Mendelian Inheritance», Royal Society of Edinburgh, vol. 52: 399-433.

Fischer, R. A. (1935, 1966, 1971), The Design of Experiments (2 ed.). Edinburgh: Oliver and Boyd. [The most relevant sections of the text are Chapter II (The Principles of Experimentation, Illustrated by a Psycho-physical Experiment, Section 8: The Null Hypothesis) and Chapter X (The Generalization of the Null Hypothesis)].

Gangadean, Ashok Kumar (1975), «Formal Aspects of Causality», Philosophy East and West, Vol. 25, No. 1, The Problems of Causation: East and West, University of Hawai'i Press.

Johnson, R.A. (2014). Predicting Future War, Parameters, 44 (1), (Spring 2014): 65- 76

Hoffman, F.G. (2007). Conflict in the 21st Century. The Rise of Hybrid Wars, Potomac Institute for Policy Studies, Arlington

James, W. (1890), The Principles of Psychology, New York: Henry Holt and Company.

Kahneman, D. and A. Tversky (1979), «Prospect Theory: An Analysis of Decision under Risk», Econometrica 47.

Kolbert, Elizabeth (2014), The Sixth Extinction: An Unnatural History, Henry Holt, New York.

Kuhn, Thomas S. (1962/1970), The Structure of Scientific Revolutions, Chicago: University of Chicago Press.

Moore, David; McCabe, George (2003), Introduction to the Practice of Statistics (4 ed.). New York, W.H. Freeman and Co.

Neyman, Jerzy (1937). «Outline of a Theory of Statistical Estimation Based on the Classical Theory of Probability». Philosophical Transactions of the Royal Society of London. Series A, Mathematical and Physical Sciences. 236 (767): 333–380.

Porter, Alan L. & Jan Youtie (2009), «Where does Nanotechnology belong in the Map of Science?» Nature Nanotechnology, 4: 534-536 [http://dx.doi.org/10.1038/nnano.2009.207].

Rietz, H. L. (1936). «Review: The Application of Statistical Methods to Industrial Standardisation and Quality Control by E. S. Pearson». Bull. Amer. Math. Soc. 42 (9): 617–618.

Robinson, William I. (2003), Transnational conflicts: Central America, social change, and globalization, Johns Hopkins University Press, Baltimore.

Robinson, William I. (2004), A Theory of Global Capitalism: Production, Class, and State in a Transnational World, Johns Hopkins University Press, Baltimore.

Robinson, William I. (2008), Latin America and Global Capitalism, Johns Hopkins University Press, Baltimore.

Sen, Amartya (2008), The New Palgrave Dictionary of Economics, 2nd Edition.

Spengler, Oswald (1926/1991), The Decline of the West, Ed. Arthur Helps, and Helmut Werner. Trans. Charles F. Atkinson. Preface Hughes, H. Stuart. New York: Oxford UP.

Thaler, R.H. (2015), Misbehaving: The Making of Behavioral Economics, New York: W. W.Norton & Company.

Tversky, A. and D. Kahneman (1992), «Advances in Prospect Theory: Cumulative Representation of Uncertainty», Journal of Risk and Uncertainty 5.

Veblen, Thorstein (1898), «Why is Economics Not an Evolutionary Science», The Quarterly Journal of Economics, Vol. 12.